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THE ILLUSTRATED POULTRY RECORD

Edited by E.T. Brown.



JUNE
1913

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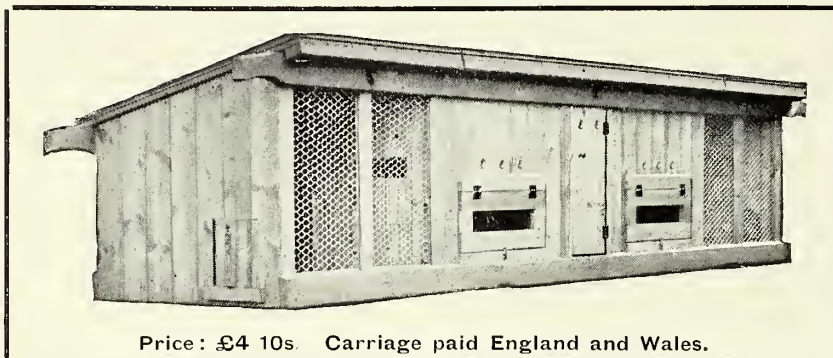
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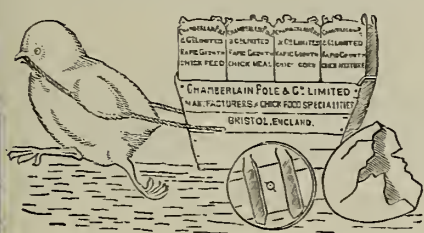
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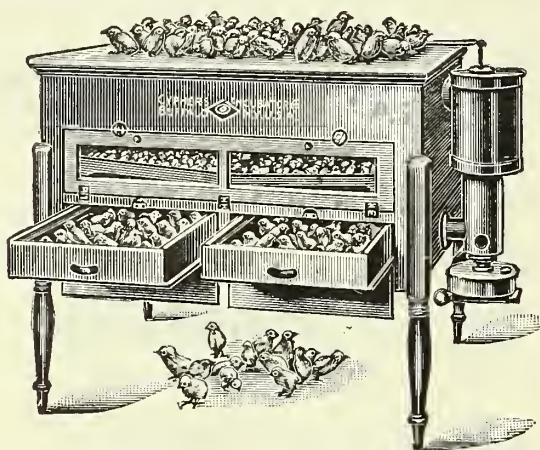
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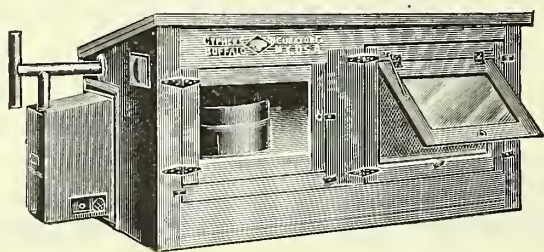
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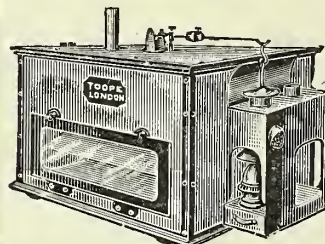
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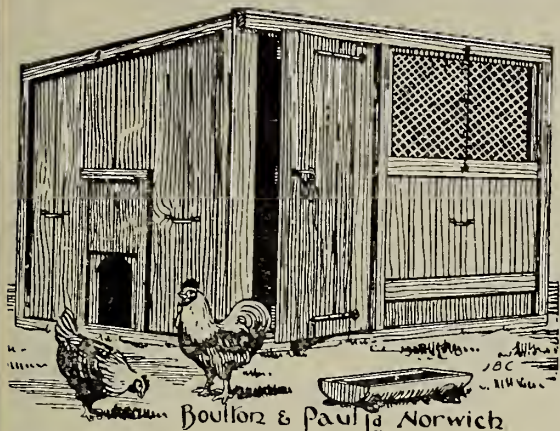


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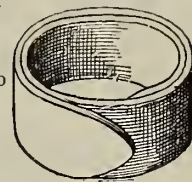
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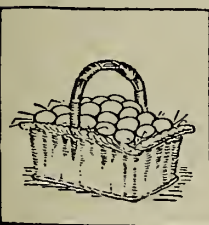
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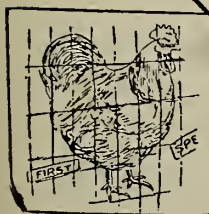
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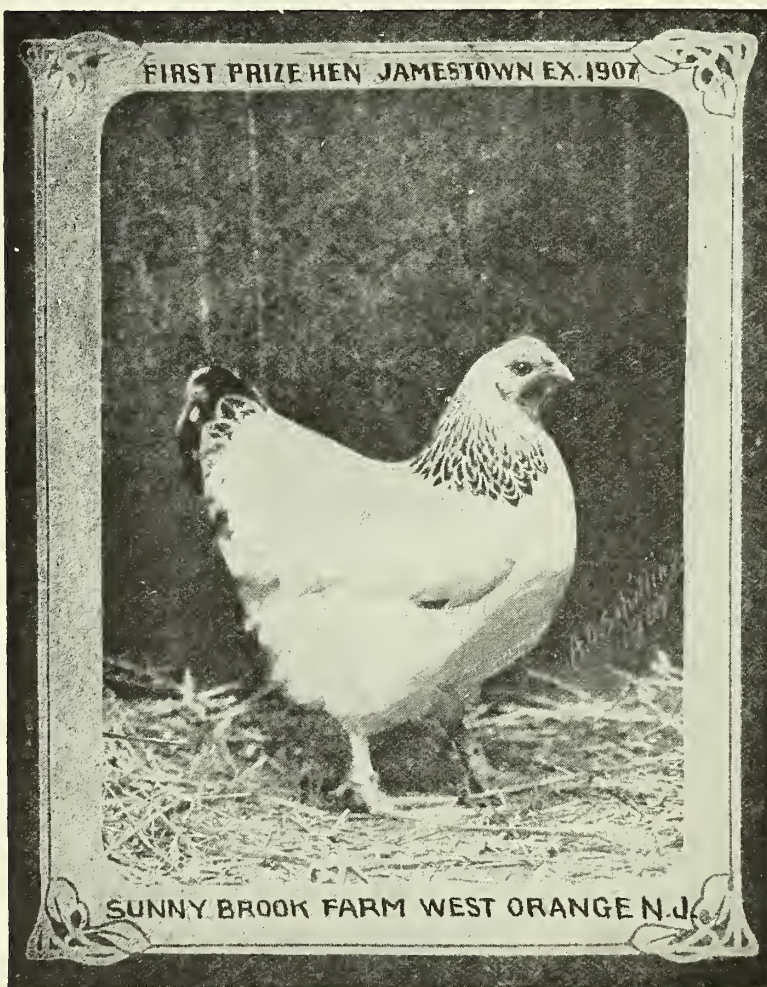
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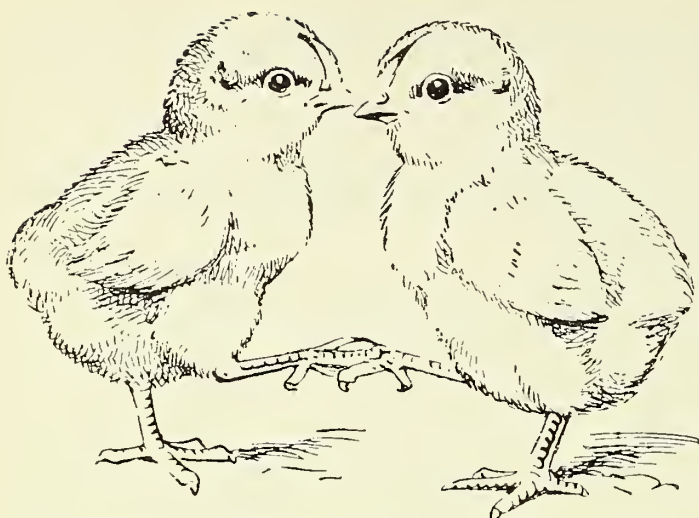
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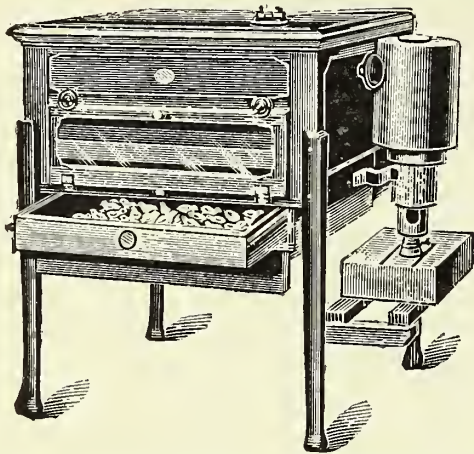
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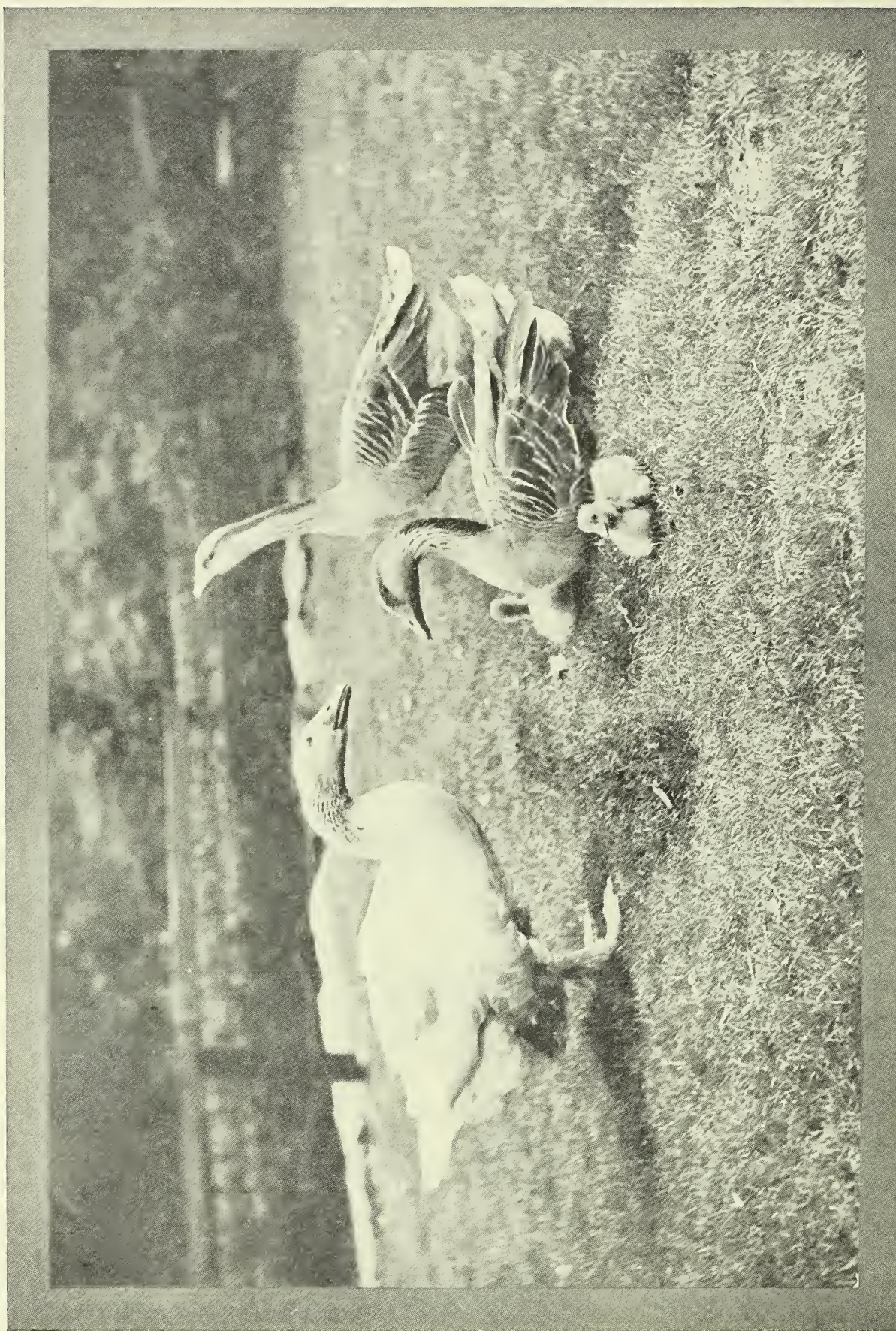
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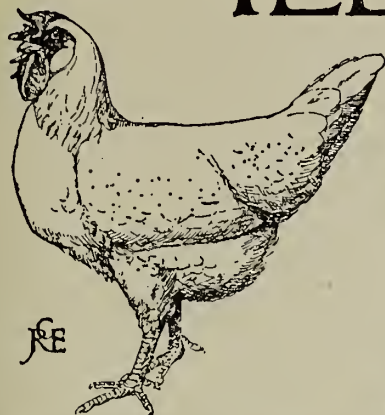
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Monthly, Price Sixpence.

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EDITORIAL NOTICES.

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Telephone: CITY, 2083

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The Editor would like to hear from readers on any Poultry Topics, and all Queries addressed to the paper will be answered by experts in the several departments. The desire is to help those who are in difficulty regarding the management of their poultry, and accordingly no charge for answering such queries is made.

The Annual subscription to the ILLUSTRATED POULTRY RECORD at home and abroad is 8s., including postage, except to Canada, in which case it is 7s. Cheques and P.O.O.'s should be made payable to the ILLUSTRATED POULTRY RECORD.

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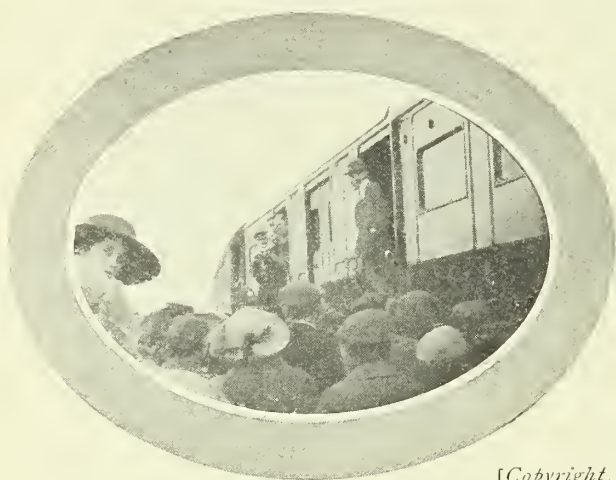
North Wales Aroused.

The date at which we had to go to press precluded our giving in the May issue of the RECORD particulars as to the various centres visited, beyond the first two days. That is, however, not altogether a disadvantage, for we are enabled in the present number to publish a more complete view of the North Wales Egg and Poultry Demonstration Train, which concluded its tour on May 6th, together with particulars which should be placed on permanent record. In connexion with the poultry industry no more remarkable movement has ever taken place in this or any other country. The fact that in twelve days more than nineteen thousand people attended the demonstrations, that nearly five thousand attended the meetings held at the twenty-seven centres, that county and local authorities vied in making a success of the expedition, that men and women of all ranks of life gave voluntarily for weeks their time and labour to bring the "egg express" as it was called by one of our contemporaries before farmers and others, that two great railway companies rendered notable service in facilitating its progress, and that the newspaper press of the entire country devoted, at a time when other questions are absorbing, a large amount of space in reporting its operations, is a tribute to the two societies to whom it is due—the Agricultural Organisation Society, and the National Poultry Organisation Society. They may be warmly congratulated upon their enterprise and initiative, as may the staff upon whom fell the work prior to and during the time when the train was in motion. Few can realise how great the labour was; certainly those alone who were privileged to see the actual operations. From the start at Euston on April 23rd, to the end of the tour, it was an unqualified success.

A Proved Need for Instruction.

One of the most striking facts which impressed itself upon the minds of those who were privileged

to share in this expedition was that almost throughout the area traversed the poultry population is a very small one, even where the conditions are most favourable. At one centre a couple of the accompanying pressmen in the course of a seven mile walk declared that they did not see seven hens. Doubtless there were more about, but in such small flocks that they could hide themselves around the homestead, so as not to be in evidence. Over the nearly five hundred miles which the egg train traversed in North Wales, not more than a score portable houses were seen from the railway carriage, and these were chiefly in the districts near to the English border. It is evident, therefore, that the area is largely virgin ground waiting to be



[Copyright

A snap-shot of the North Wales Egg Train.

The Director addressing some Welsh poultry enthusiasts.

occupied. Such may show great backwardness on the part of all concerned, as did the elementary questions asked by visitants to the cars. In some places the models of poultry houses, incubators and brooders, not to say trap nests and crammers were absolute novelties to the great majority of the people. At the same time what is here stated shows how great are the opportunities for development. In respect to breeds and breeding, to modern methods of poultry-keeping, Wales has only been influenced to a very limited extent. County Education Authorities and other public bodies have done practically nothing to promote this branch of agriculture. Unless these are roused to systematic and sustained action the egg train will not accomplish all that might be. Education is imperatively required alike for County Councils and the governing bodies of colleges as well as possible producers.

—and Organisation.

That there is great need for effective organisation of the egg and poultry trade throughout the greater part of the six counties which comprise North Wales is equally apparent. Before, however, this can be carried to its completion, production on modern lines must be vastly extended over the entire area. It is surprising that more has not

been done hitherto. The large summer population which visits the holiday resorts on the beautiful coast line and those among the mountains of this charming district, provide an abundant outlet for produce at and after Whitsuntide, which is a valuable asset if that were realised. Unfortunately, however, the system of marketing which has prevailed over the area has been such as to hinder rather than help the poultry industry. In a few places prices are fairly good, but over the greater part of the country they are capable of great improvement, where and when the methods adopted conduce to better quality. Here we have an explanation why the testing room was a great source of attraction, and a powerful medium for instruction as to the many and varied classes of eggs from new-laid downwards. On the other side, Welsh table poultry offer similar opportunities to eggs, for they are generally speaking poor in quality. Yet there are several districts where the conditions are specially favourable to this branch. A start has already been made, notably in Anglesey, and what is wanted is the cordial co-operation of farmers and others for uniformity of production within given areas, and combination in respect to marketing. Should that follow, the North Wales Egg and Poultry Demonstration Train, will mark an era in the history of this industry.

Parrot Methods in Poultry.

Whilst it is desirable and wise to learn what has been done elsewhere in promotion of our pursuit, and, whenever desirable adapt such methods to our special conditions, for that is the way of progression, a merely blind copying of others is to be deprecated. There is, unfortunately, too great a tendency in this direction, more especially on the part of public authorities and societies, those responsible knowing little practically of poultry breeding and management. Where such is the case they seem to imagine that the way of success is merely to reduplicate methods which have proved successful in Denmark or Ireland, failing to understand that what may be necessary in those countries is often totally unsuited to our own conditions. Poultry keepers themselves are not free from blame in this direction. A large amount of effort has been wasted and money lost by adopting intensive systems as yet in the experimental state, or of accepting paper idealisations without waiting for definite results. With the present movement for development of the poultry industry this tendency is specially evident in some directions, only one of which may be cited, namely, the starting of breeding stations supported by public money. To these we have referred before, but the question has come up again. Necessary as these have been in Ireland and the congested districts of Scotland, where they were merely a payment of a pressing indebtedness, we are firmly of opinion that in England, Wales, and Southern Scotland, they are not needed, and would be a grave injustice to the multitude of poultry breeders, who have done more in promotion of the

industry than all public authorities combined, and who have a right to protection against unfair competition of this nature. If county and other public bodies would spend money in education and organisation they would render a greater service.

The Sportive Side of Laying Competitions.

The time has surely come when the question of laying competitions demands careful re-consideration. So long as these were promoted by club or private enterprise no one had any right to criticise, much less object. When, however, public money is provided the whole aspect of affairs is changed. Everyone will admit that in the first instance such competitions rendered good service, in that they showed what hens were capable of in the shape of egg-production. That they have done anything in the way of definite improvement of breeds there is nothing to show. However, the poultry industry has entirely changed in the last dozen years. Laying competitions as conducted in this and other countries are not in any sense practical. A further aspect of the case is brought forward by Mr. J. W. Hurst, in the *Field*, who says:

There is a growing tendency to regard the simple laying competition (or common strife for a prize) as a mild form of sport, and at a recent meeting at Burnley—where they are very skilful in the conduct of such contests—there was some suggestion of a federation with other towns with a view to the multiplication of laying competitions in working class centres.

To set up merely a new form of competition will do harm to the industry at large. A further point is raised by the same writer:

The mere annual repetition of this common strife for a prize . . . is likely to degenerate into an ingenious scheme of advertisement for a few astute and clever breeders.

What is here stated cannot be questioned. It is time that as England led the van in laying competitions it should do so again in other ways. The Board of Agriculture would do well to convene a representative committee to consider the entire subject.

Poultry Hotels.

We wonder whether it can be true that one of our leading makers of poultry houses is preparing designs for a ten storey poultry house, to be fitted with elevators for birds and attendants, the former of which will be brought down in special roosting cages, and transhipped to various parts of the farm on motor wagons, by which they will return at night. To complete the affair it might be well to add a dining (feeding) room and a bar, and to fit every sleeping place with a receiver for a megaphone, so that the workers can be aroused if required by the inmates. When once the *bacillus intensificus* enters the brain there is no limit to imagination, and we may prepare ourselves for an even more serious outbreak in the near future. We hope the epidemic will not be unduly severe or prolonged, and that those who have money to spare

may be chiefly affected. Unfortunately, such diseases do not restrict themselves in this way.

The Effect of Lead upon Fowls.

During our recent visit to North Wales we had an interesting conversation with a farmer living in one of the districts where there are lead workings, in the course of which he called attention to the fact that himself and others have lost a considerable number of birds. On examination it was discovered that these had suffered from lead poisoning. It is well known that the mineral referred to is an irritant poison, even when found in minute particles in the air, as in the case of workers in lead factories. This is the first instance we have come across in which fowls were affected. So far as we were able to learn it was only birds which ran where there was lead contaminated water, either in the shape of washings from the mines, or water coming from these. Such raises an important question deserving careful inquiry. We can hardly imagine that any top soil is so impregnated with lead as to affect fowls running thereon, and so far as the evidence obtained was available, other fowls in the same district had not been affected. What seems to be evident is that poultry must not be allowed access to lead impregnated water. On the other hand the difference between animals and birds has to be realised. The former graze, whereas the latter peck over the actual soil itself. We should be glad to publish further evidence in respect to what is a most important question.

More About Imports.

In our last issue attention was called to the large increases in imports of eggs and poultry during the first quarter of the current year as compared with 1911 and 1912. The returns for April reveal a continuance in so far as eggs are concerned. The quantities received during the month were nearly double the corresponding period of 1912, and were practically fifty per cent. greater than in 1911, the total figures being, in great hundreds, 1911, 1,209,237; 1912, 991,966; 1913, 1,827,153. Whilst all countries recorded except Italy show an increase, the bulk of the advance was due to Russia, amounting to no less than 450 per cent. over 1912 (1912, 135,668 great hundreds; 1913, 755,314 great hundreds). Denmark had sent us 50 per cent. more. The total values for the four months work out as follows: 1911, £2,082,701; 1912, £2,039,067; 1913, £2,557,035. A jump up of more than half a million pounds sterling is phenomenal, showing that the efforts for advancing production on this side is stimulating similar efforts elsewhere. The remarkable thing is the small effect on prices. Whilst the total values for the four months have fallen from 8s. 11d. per 120, in 1912, to 8s. 6½d. in 1913, due to the Russian increase, Danish advanced from 10s. 9d. to 10s. 10d., and Dutch from 9s. 9d. to 10s. So far as table poultry is concerned, the four months totals show an increase of 29,557 cwts. (1912, 133,862; 1913, 163,419 cwts.), due entirely

to the vast increase from the United States. On the other hand the April figures dropped considerably (1912, 18,350; 1913, 11,300 cwts.) The values advance to the end of April is £137,654, or nearly 35 per cent. It is, indeed, a phenomenal year. A further surprising fact is that the re-export of dead poultry has this year dropped nearly half.

A New Record in Laying Contests.

Reports of the results of the eleventh laying contest at Hawkesbury College, New South Wales, are just to hand in which not alone is a new record as to number of eggs produced by the winning pen, but Indian Runner ducks have succeeded in gaining the blue ribbon. The previous record for first year laying by six birds was 1,589 eggs laid by a pen of White Leghorns at the Roseworthy Agricultural College, South Australia, but in the present case Mr. F. Morrison's pen of Indian Runner ducks produced 1,601 eggs in the twelve months, which averaged 310z. per dozen, with a total weight for the half dozen birds of 252lbs., or an average of 43lbs. or 276·83 eggs, the net market value being £8 11s. 2d. The highest monthly record was 167, and the lowest 53. This is, indeed, a wonderful performance. Even more striking, however, is the production of the sixty first-year Indian Runner ducks entered. The total of eggs produced by them was 12,166, or an average per pen of 1,216·6, or 202·76 per bird, the total market value of which is stated to be £62 3s. 0d. So far as White Leghorns are concerned the *Sydney Daily Telegraph* says that "the general laying of the hens has been rather below that of the previous year" which would indicate that what has been reported, namely, influence of breeding from abnormal layers, is telling the tale which might be expected. The results above named bear out what has been contended, that small bodied birds are essential for heavy egg-production.

The End of a System.

Some time ago we made reference to a trial in New Zealand in which Mr. F. S. A. Gordon claimed damages to the tune of £2,000 against the *New Zealand Times* for alleged libel, in consequence of criticisms made respecting his so-called system of selecting laying hens, by which it was stated the productiveness of each individual bird could be correctly foretold—of course at a substantial fee. The defendants did not mince their language, so that they were clearly liable for damage unless

they could prove their case. On that occasion the jury disagreed. The plaintiff brought his case forward again in the Supreme Court at Napier before the Chief Justice of the Colony. The result this time was emphatic, as a verdict was given for the defendants with costs on a higher scale. Whether this will prevent people wasting their money by purchasing so-called secret systems remains to be seen, but we hope it will be a warning. There has been far too much of this class of exploiter specially in America and the Colonies. Happily we have been fairly clear from it here, and we hope to so continue. That is not the way of progression. Knowledge in these days is not to be advanced on such lines.

U.S. Food Research Laboratory.

This department of the Bureau of Chemistry has been removed from Nashville, Tennessee, to Sedalia, Missouri, where it will be in charge of Professor H. C. Pierce. It is announced that "one of the first steps will be to organise the dealers in the State to buy eggs on a quality basis."



A LUCKY FIND.

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On Thursday, the 5th inst., the Editor will leave London for an extended journey through Poland, Russia, Sweden and Norway, with a view to studying the poultry questions in these countries. If there are any questions in which readers are particularly interested and on which they would like information, the Editor will be very pleased to look into any such matters as far as may be in his power. Any communication on this question must reach the Editor not later than the morning of the 5th inst.

Echoes of The Welsh Egg Train.

THE NORTH WALES CRUSADE.

By EDWARD BROWN, F.L.S.

"WAKE up Wales," were the words of Lord Boston, who presided at one of the Anglesey Meetings during the recent visit of the egg and poultry train to that island. Before the end of the tour everyone concerned felt that whatever the ultimate results may be, we had succeeded in thoroughly rousing every section of the community in the six counties visited. The interest manifested, in spite of adverse conditions during the greater part of the time, the enthusiasm manifested everywhere, the keenness with which the addresses were followed, and the earnest seeking for information from the splendid staff of organisers, regular and voluntary, for we had to press everyone into service, have left an impression which can never be effaced. It has been my fortune to take part in many movements, but I have never seen anything equal to the scenes enacted from Mold to Llanymynech. From start to finish it was a succession of remarkable gatherings. Much of this was due to local organisation, to the careful preparations of the ground by ladies and gentlemen, and by local societies, and to the invaluable help rendered by the newspaper press, both general and sectional, for these had made our advent known in even the more remote sections of North Wales. There was, however, something more than mere curiosity, or seeking after some new sensation. Only those who were really interested would have come miles under the adverse climatic conditions which prevailed during the greater part of the time, as was the case at many centres. No stronger evidence can be adduced that we had fired the imagination and inspired a demand for practical knowledge than what has here been stated.

This is not the time or place to enter into detail as to the tour itself. Much has already appeared in newspaper reports. More will be embodied in the official report, which will be published in due course. It is fitting, however, to bear testimony to the services of those engaged in the work during the fortnight. Whilst it may be forgiven if

only one name is mentioned, that of Mr. Verney Carter, the demonstrator in chief, whose knowledge of eggs and the egg trade is as profound as it is unrivalled, and whose labours were onerous in the extreme, the others who took part brought earnestness of purpose, enthusiasm, and devotion to bear in a manner which commanded the admiration of all. No money could command such labour and service. That was incidental. Behind all was the consciousness that they were engaged in a work of national importance, the development of the resources of North Wales. Such was ever present as an incentive, if that were needed, to bring out the best in every one so engaged. Even those who came as observers were inspired in a like manner, and to them we owe much for help willingly rendered. The splendid arrangements made by the two railway companies concerned, the London and North Western, and Cambrian, the co-operation of their officials from the respective General Managers to the humblest local members of the staff, can only here be mentioned briefly. Every requirement was provided for before it was realised. Upon this more will be said in another place.

Whilst it may be true that the novelty of this expedition made for its success, for on some of the branches a restaurant car had never previously been seen, and the working of a typewriter in the train awakened a large share of attention, the interest aroused was much deeper. We have learnt that it is possible to stir up the dry bones and rouse the lethargic. We must, however, carry the message of progress even by adoption of new methods. Nor is this only required by producers themselves. County and Collegiate Authorities have needed the same influence, and if we have created a demand which cannot be resisted for instruction, that will be well worth the cost in money and physical effort.

What is to be the result? may fitly be asked. That remains to be seen. It is not enough to have moved the face of the waters, we must descend into the pool, and deal in detail with

what has been to some extent generalised. Every section of the six counties requires careful and adequate going over, in order that the harvest may be gathered. That means steady and prolonged work. This is only the beginning. It is, however, a remarkable commencement, and so much to the good.

To summarise the impressions left by this tour is an impossibility. That would require a volume. It may, however, be stated that the watch-words for the immediate future "Education; increased and improved production of eggs and poultry; and organisation for more efficient marketing," are all of equal necessity and importance. The crusade for better poultry and more poultry, the former prior to the latter, has been well begun.

Egg Train Statistics.

In view of the remarkable interest awakened in the North Wales Egg and Poultry Demonstration Train, it is desirable to place on record the figures in detail, as to the number of people who attended the demonstrations at the various places visited, and also such as were present at the meeting. Special arrangements were made for elder children from elementary schools, with a view to the future, which were greatly appreciated. Of the 19,068 total visitors, about 3,000 were these children, some of whom had come several miles to be present. It may be mentioned that the numbers stated are absolute, as those entering the cars were counted by railway officials and reported each day. Such should be made clear, otherwise it might be thought in view of the large attendances that the figures given were merely estimates.

Date.	Place.	County.	No. at Demonstrations.	No. at Meetings.
April 23	Mold	Flint	800	180
" 24	Ruthin	Denbigh	508	150
" "	Corwen	Merioneth	604	130
" "	Denbigh	Denbigh	625	180
" 25	Rhuddlan	Flint	550	190
" "	Llanrwst	Denbigh	560	170
" 26	Llanfair P. G.	Anglesey	635	140
" "	Bodorgan	"	440	250
" "	Holyhead	"	580	100
" 28	Red Wharf Bay	"	648	400
" "	Llanerchymedd	"	715	130
" "	Amlwch	"	1005	200
" 29	Llangefni	"	1352	120
" "	Carnarvon	Carnarvon	950	250
" 30	Pen-y-groes	"	817	130
" "	Pwllheli	"	1827	350
May 1	Portmadoc	"	1150	260
" "	Harlech	Merioneth	529	160
" 2	Dolgelley	"	791	250
" "	Machynlleth	Montgomery	814	120
" "	Llanbryn-mair	"	212	90
" 3	Newtown	"	480	90
" "	Caersws	"	240	150
" "	Llanidloes	"	777	250
" 5	Welshpool	"	779	160

May 5	Llanfyllin	Montgomery	371	180
" "	Llanymynech	"	309	90
Totals 27 centres ...			19,068	4,870

In addition to the above, three special gatherings of school children were held, at which the director gave addresses. The number (350) which attended are not included.

The demand for poultry leaflets was far in excess of the supply. In all some 65,000 were distributed.

SOME IMPRESSIONS BY THE DEMONSTRATORS.

By PROFESSOR W. HOPKINS-JONES,
(The University, Bangor).

HAVING intimately known the district through which the egg train passed in North Wales, having accompanied the train for over a week and taken part in the work, I think a few of my impressions may prove interesting.

From the very first meeting at Mold on April 23rd until the end, the tour has been an unqualified success. At every stopping place the cars were visited by crowds of interested spectators, some of whom had travelled long distances in order to see and hear something that would help them in the future. Altogether over 19,000 people passed through.

One could not help admiring the enthusiastic way in which the demonstrators on the cars did their work, often under very trying circumstances, and the assiduous attention given them by the public proved that their labours were not in vain.

The poultry industry is in a very backward state in North Wales, more from ignorance of approved methods than from wanton neglect; but I am confident that what the people saw and heard on this occasion cannot fail to bring about a great improvement both in quantity and quality. The statistics given by Mr. Edward Brown, Director of the train, on the present state of the poultry industry, and the possibilities of North Wales in this direction, were an eye-opener to many, and not a few went away thinking it over. This is really all that a passing mission like the present one can hope to accomplish, but, having accomplished it, greater things will follow.

What struck me more than anything was the need of organisation in connexion with the industry. At one of the stopping places I took a walk into the town, and in the course of conversation I was told of two families who were looking out for spring chickens, and who were willing to pay almost any price for them, but could not get any without sending to London.

Not ten minutes after a person came to me on the train complaining that although he had spring chickens of excellent quality for sale, he could not find an outlet for them. Undoubtedly, one of the features as the result of the visit of the egg train, will be the formation of co-operative egg and poultry societies in different districts. There is already one such society in Anglesey which has proved so beneficial to the members that others will soon be formed.

It was very evident from the numbers of questions asked on different subjects connected with poultry-keeping that the interest of the public had been aroused. It is necessary, not only to educate the farmers and cottagers as to what to produce, and how, but also to educate the consumer as to what to buy, always to insist on good quality and absolutely to refuse anything of an inferior grade.

By E. W. JONES.

(Anglesey Egg Collecting Depot).

HAVING heard a great deal about the results of the egg train that visited South Wales three years ago, I was very anxious and very sceptical as to the success which would follow a similar experiment in N. Wales. It was in this doubting mood that I went to Chester to meet the train on its way from Euston, thinking that I was going to have an easy time for a fortnight, and also thinking that it was waste of valuable time as I had several young societies newly registered and all required nursing. Judge then of my surprise and joy when I saw the contents of the train for the first time, a "Royal" on wheels as far as poultry appliances and products were concerned, and my illusion of having an easy fortnight was quickly dispelled at our first demonstration which



THE DEMONSTRATORS OF THE NORTH WALES EGG TRAIN.

[Topical.]

Reading from left to right:—Mr. D. Thomas, Mr. Verney Carter, Mr. T. R. Ferris, Mr. Finberg, Mr. Edward Brown, Mr. W. Williams, Mr. Jones, Miss Hallett, and Mr. F. B. Meyer.

The good work already done by the visit of the train will be followed up on the educational and instructive side by the Agricultural Department of the University College of North Wales, Bangor, by means of extension lectures illustrated by lantern slides, and on the organising side by the National Poultry Organisation Society, and the Agricultural Organisation Society. The services of all three will be free of charge, and in this way it is hoped to see the message of the egg train, so aptly put by Lord Boston in the words "Wake up, North Wales," driven home to the betterment of all concerned.

took place at Mold. Mr. Brown deputed me to explain the incubators and brooders, and although I have had some experience with these machines during the last twenty years, it was as much as I could do to answer the numerous questions asked regarding various causes of ill luck in their working, e.g., chicks failing to hatch, cripples, moisture, etc. The six counties visited had each its own particular traits as regards questions asked, and interest displayed. In *Flintshire* they did not seem to have given much attention to poultry, although it is a fairly good industrial county, and has very

good seaside resorts ; their complaints were that their markets were bad. This is due in a great measure to their methods of marketing, and also to the nondescript kind of fowls they keep.

Denbighshire is a very fertile county and a good deal of attention has been paid to poultry matters, but still this is confined to comparatively few, and there is a good deal of room for development.

an incubator was, and the interest evinced by the children, and their taking down notes of what was said. It also afforded me an immense amount of pleasure to show and explain the incubator to hundreds who had never seen such a thing, and the surprise shown by them that such a thing as hatching by a machine was possible. The exhibits of eggs from the various countries also evoked



THE NORTH WALES EGG TRAIN.

The Lecture at Corwen Station.

[Topical.]

Montgomeryshire also is a very rich county, and it was here that I felt the keenest interest was taken of all the counties visited. Nearly all our visitors had a real live interest in the poultry industry, and were not coming through the cars from curiosity but were anxious to learn.

We visited three places in *Merionethshire*, but in each case the majority of our visitors appeared to be curiosity seekers. In *Carnarvonshire* and *Anglesey* great interest was taken, but here again we did not get the right class of people except in one or two places. This was due in a great measure to the weather, which has kept farmers backward in their sowing operations, and they could not afford to miss one fine day, it being already very late. In the average season they would have finished by the middle of April, but this year they will not have finished by the middle of May. I was much impressed in many places with the school children, the trouble the masters had taken previously to give them an idea of what

great interest : some asked if they were real eggs, others if we had arranged them for exhibition, and when told that they were all done in this manner abroad, and that we had only bought them on the London Egg Exchange to show how these things were done by other countries, they were greatly surprised. At the same time admitted that there was really nothing but what they could do if they tried.

Now as to the result of the whole tour my candid opinion is that nothing but good can come of it. It has already set them thinking about a very much neglected branch of the farming industry, and it is generally felt nowadays by farmers that they cannot afford to despise the small side lines in connexion with their business.

Mr. George Woodward.

The Victorian Spanish Club gave this well-known Antipodean fancier a social send-off the night previous to his sailing on another visit to England.

By T. R. FERRIS, M.Sc. (of the A.O.S.).

"A man who makes two blades of grass grow where one grew before is a benefactor of mankind," said Herbert Spencer, and this quotation applies in a very much wider sense to the man who brings about an increase in the livestock of a farm, county, or country. Of course, the first achievement makes it possible for the farmer to keep more stock, but he does not always avail himself of the opportunity. Indeed not infrequently he fails to take full advantage of the material he has at hand which could be utilised for the purpose of stock raising. The farmer who is in this lax condition requires encouragement and an incentive to use his initiative. This, I am sure, has been supplied in the six counties of North Wales as regards the poultry industry by the North Wales Egg and Poultry Demonstration Train.

I have been invited to give a few of my impressions on the tour and must state at the outset that it is a matter of great satisfaction to myself that I was privileged to take part in the tour. The experience gained by all the demonstrators must in many cases prove invaluable to them in after life and the enthusiasm shown by the farmers all along the route will stimulate them to fresh endeavours in bringing about the regeneration of the agriculture of our country, both generally and as regards poultry-keeping. The enthusiasm of the Welsh farmer and his great desire to gain knowledge at every place where the train stopped was, I think, one of the most distinctive features of the tour. At nearly every stopping place we were greeted by large numbers of people representing all portions of the agricultural community from the farm labourer to the farmer of many hundred acres, all equally interested and making the most of the opportunity to obtain new knowledge. This enthusiasm, of course, made the work of the demonstration very severe, but it encouraged each one to put forth their best possible efforts.

Everyone must have been impressed by the enthusiasm and energy of the Director of the train, Mr. Edward Brown, F.L.S., who gave no less than thirty-two lectures at the various places visited, and did everything possible to drive home the claims of the poultry industry and the advantages which would accrue to the community at large by more business-like methods in this branch of agriculture.

The possibilities of the country for poultry keeping in conjunction with the regular work of the farm are enormous and one can easily realise that Mr. Brown's statement, to the effect that about four and a half times as many poultry could be kept in the six counties visited without the displacement of any existing crops or stock which are now grown, is in no way an exaggeration. There is a great opening for the keeping of poultry in the fields of the valleys in the beautiful districts through which the train passed, and the dotting of poultry houses in these fields would make a great improvement to the picture viewed by the eyes of a patriotic Briton.

By B. W. FINBERG (of the L. & N. W. Railway).

There is no doubt that only a very few of the 19,000 persons who passed through the L. & N. W. Demonstration Cars had any idea of the amount of detail work that was necessary in the Railway Companies Offices in arranging the Tour. With one or two exceptions, the 27 places where meetings were held were comparatively small towns or villages, and consequently station accommodation was limited, and many difficulties had to be overcome before the cars could be placed in positions easily accessible to the public. The demonstrations and lectures took up several hours at each place, and in many cases it was not possible to leave the Egg and Poultry Train at the platform for any length of time owing to other trains requiring to pass through the station. In such instances the "Special" had to be placed in adjacent sidings and two pairs of steps were supplied by the Railway Co. so that the cars could be entered without difficulty from the rail level.

Considerable pains were taken in fitting up and preparing the two large demonstration vans for the journey, and various members of the organising societies made several visits to the carriage sheds at Euston for the purpose of explaining exactly what was required to convert one of the vans into an egg testing room, with electrically lighted testers.

It was foreseen that the large staff of lecturers and demonstrators—who would travel with the train—would have considerable difficulty in securing meals at many of the wayside stations where they would find themselves at lunch and tea times, so it was decided to attach a restaurant car for their use. This car, which was 65ft. long, required very careful shunting into the sidings, as at many of the meeting places on the branch lines in North Wales vehicles of this size are seldom or never run. In fact, at some of the places similar sized vehicles were sent over the rails prior to the running of the egg and poultry train in order to see that the scheduled arrangements could be carried out with absolute safety. The provisioning of the car was made from Euston; an attendant travelling down with the supplies every other day and meeting the train at the appointed places, and a chef and two attendants prepared and served the meals on the train.

Arrangements were made for the train to run "Special" over the L. & N. W. line and partly over the Cambrian Railway, and this entailed the printing and issuing to the staff of a 4-page notice, giving the scheduled times the train would run each day.

The officials of the L. & N. W. and Cambrian Railway Companies took a keen interest in the running of the train, and every reasonable facility was given to the promoting societies to assist them in their efforts to develop the poultry interest in North Wales.

THE TOUR OF THE "EGG SPECIAL."

By THE EDITOR.



HE journey of the missionary egg train to North Wales is a thing of the past. To sum up our impressions gathered when travelling with the special train, we can only say that the whole trip has been eminently successful, and far beyond the expectations even of its organisers. To tell even a little of the enormous amount of labour and thought that have been expended for months past by the Director, Mr. Edward Brown, and his staff, would occupy too much space, but everyone must realise that the organisation to the merest detail has been perfect, since no hitch has occurred or no unforeseen event happened. But apart from the work of the A.O.S. and the N.P.O.S., the efforts of the officials of the L. & N.W. Ry Co., and the Cambrian Ry Co., have been crowned with success, and the arrangements made for the running of the special were complete. No one can understand the amount of detail work that has had to be considered by the office staff of the Superintendent of the Line, until they have had the whole detailed scheme explained to them. What most people would consider unimportant points, such as providing the supplies of water and gas, to say nothing of the food for the dining car, have all entailed anxious thought and considerable organisation. We are glad to give some information on this point.

It is unnecessary for us to give a complete description of the tour, since this has been given week by week by our contemporaries; therefore we will content ourselves with indicating some of the main features of the trip.

The time of the staff has been fully occupied in explaining and describing the various exhibits, and even in rush hours, when hundreds of visitors were clamouring for admittance, one imagined they would have been unable to handle such large numbers if it had not been for the splendid assistance of Mr. G. P. Dallinger of the Board of Agriculture, Mr. S. H. Lewer of the *Feathered World*, Mr. Finberg of the L. & N.W. Ry. Co., Mr. W. Hopkins-Jones and other volunteer assistants. To an outsider to hear their orations regarding the fireless brooder and the bone crusher—repeated dozens of times a day—were most illuminating. They entered into the spirit of the expedition with light hearts, and so thoroughly did they tackle their self imposed labours, that even the temptation to visit Bettws-y-Coed on Friday, 25th April, when only four miles away at Llanrwst, was contemptuously disregarded.

The two most lasting memories we have of the trip are the assiduous attention to their duties by the staff, and the intelligent interest displayed by the visitors. With the former no question of detail put to them by the public was considered too small, and their patient explanations, to which we listened many times, were as fresh and complete at

the end of a strenuous day as early in the morning. Whatever good results may accrue from the somewhat rapid passage of the Egg Special through the six Northern Counties of Wales will be due largely to their endeavours. One imagined at first that many people would attend at the numerous stopping places in a spirit of curiosity. But this was hardly ever the case. Even wind and rain had no effect upon the attendances, and many people came long distances in pouring rain, with a gale blowing to add to their discomfort.

We thought at Mold, our first stopping place, a record had been reached not likely to be beaten, when 800 people passed through the vans, but we were hopelessly out in reckoning. At Llangefni upward of 1,300 visitors came forward, and while at Pwllheli a total of 1,827 was reached. In all at the 27 centres at which halts were called a grand total of well over 19,000 passed through the vans.



Lord and Lady Boston visiting the Egg Train at Red Wharf Bay. [Copyright.]

The Anglesey Egg Collecting Depot, a co-operative society affiliated to the A.O.S., has its Headquarters at Llanfair P.G., and its existence is largely due to the interest taken by Col., the Hon. Stapleton Cotton, and Lord and Lady Boston.

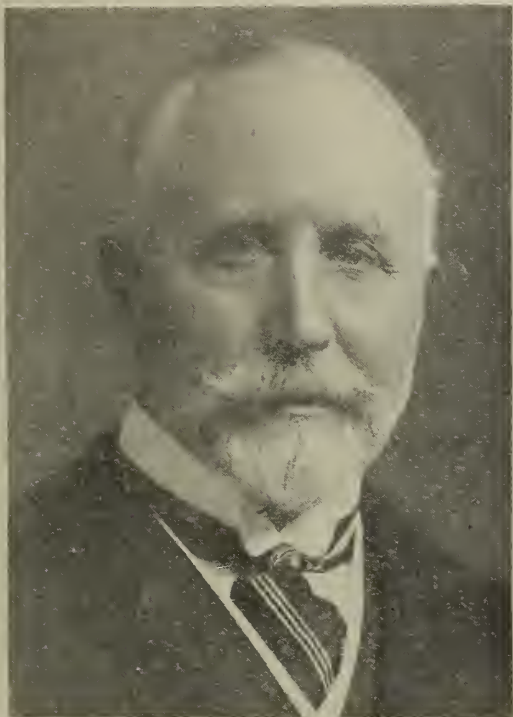
From first to last the tour has been attended with unlooked-for enthusiasm and success, and the effects of the travelling poultry school will undoubtedly be manifested in the future, not only by an increase in production, but by its necessary co-partner—co-operation in marketing. All concerned are to be heartily congratulated. They have been laying the foundation upon which will be erected in the future a great industry, which will confer lasting benefit on those who live in the northern rural districts of the Principality.

WHO'S WHO IN THE LONDON AND NORTH WESTERN AND CAMBRIAN RAILWAYS.

The Lines Responsible for the Running of the Egg Train.

Sir Frank Ree.

Sir Frank Ree was born in Fulham, in the year of the first national exhibition. After travelling considerably on the Continent his business training commenced with Messrs. Lebeau and Co., continental carriers to the London and North Western Railway. In 1873 he joined the L. & N.W.R. and was attached to the Broad Street (City) Goods

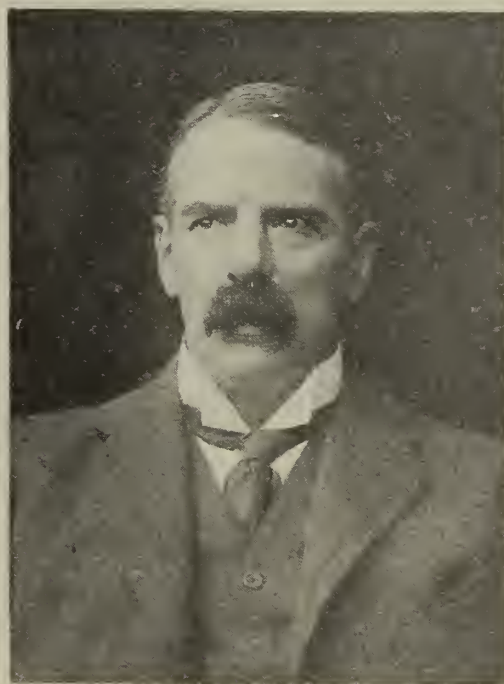


Sir Frank Ree.

Depot, later being promoted to Euston. He became assistant to Mr. David Stevenson, the London traffic superintendent of the railway, and in 1885 was appointed to Liverpool, and later became manager for the Liverpool and Birkenhead district. In 1893 he returned to Euston as chief goods manager, and in 1900 acted as chairman of the goods managers' conference of the Railway Clearing House. Having occupied the position of goods manager for over fifteen years Sir Frank Ree has by his experience of the position as General Manager of the London and North Western Railway reached what is generally considered to be the zenith of the successful railway career. Sir Frank Ree succeeded Sir Frederick Harrison as General Manager on the 1st February, 1909, and on January 1st, 1913, he was honoured by His Majesty the King, a knighthood being then conferred upon him.

Sir Robert Turnbull.

Sir Robert Turnbull was first appointed to the position of assistant superintendent at Liverpool, where he had the advantage of working under Mr. James Shaw, then superintendent of the northern division of the London and North Western Railway. After acting as Mr. Shaw's assistant from March 1877 to March 1885, Sir Robert Turnbull removed to London to take up the position of the district superintendent of the southern division of the North Western system. Two years later, in April 1887, he became assistant superintendent of the line, and in August 1895 was appointed to his present position of superintendent of the line. Sir Robert Turnbull was elected to the chairmanship of the superintendents' clearing house conference after only four years' membership of that body. In 1906 he was appointed a member of the committee then established to deal with railway employment

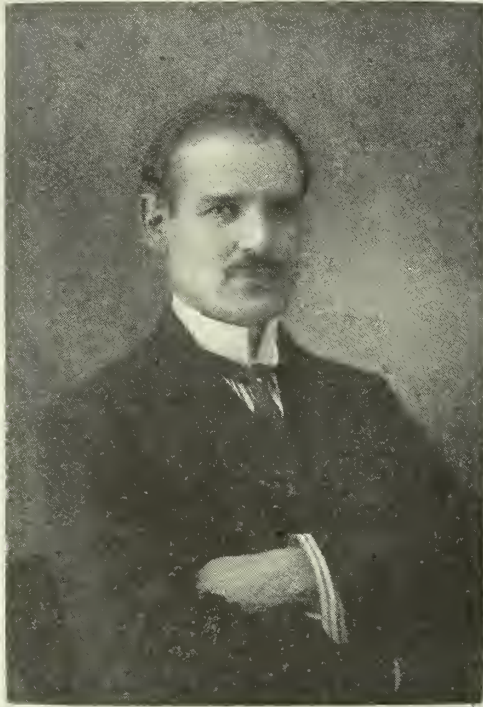


Sir Robert Turnbull.

safety appliances, which has done so much valuable work in the directions indicated. Two other members of the committee were Lieut.-Col. Sir Horatio Yorke, of the Board of Trade, and Mr. Richard Bell, then M.P. In the list of 1911 New Year's honours he was appointed to the fifth class of the Royal Victorian Order. In April of this year Sir Robert Turnbull received Command to proceed to Crewe Hall, where the King conferred upon him the honour of knighthood.

Mr. S. Williamson.

Mr. Samuel Williamson, the manager of the Cambrian Railway, has been in the service of the company for over thirty years. He received his early training under the late Mr. Conacher, who

**Mr. S. Williamson.**

formed such a high opinion of Mr. Williamson's capabilities that upon his appointment to the managership of the North British Railway he offered him a confidential position on his staff. Mr. Williamson, however, decided to remain with the Cambrian, and in 1906 was appointed secretary. In 1911 he was appointed to the dual position of Secretary and General Manager.

**Mr. Finberg.****Mr. B. W. Finberg.**

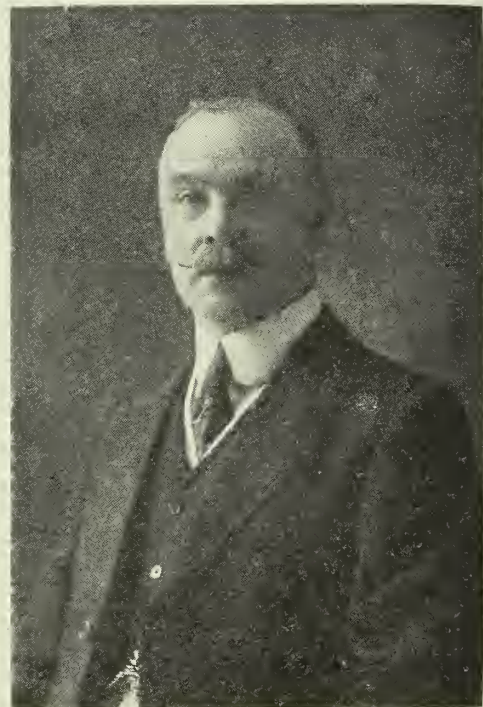
Mr. Finberg, who is in the General Manager's Office of the London and N.W. Railway, was responsible for the arrangements of the egg train, and on another page he gives a few interesting details concerning the running of the special.

Mr. H. S. Williams.

Mr. Williams joined the service of the Cambrian Railways in 1877, under the late Mr. Henry Cattle, who was then traffic manager. After serving in various capacities in the chief offices at Oswestry, he was, in the year 1897, appointed Chief of the Trains and Out-door Department, which, on a line operating 288 miles of railway, nearly all of which is single track, is an onerous and responsible position.

His abilities were acknowledged by the directors in 1910, by appointing him assistant to the traffic manager, which position he now occupies.

His able services in connexion with the movement of large bodies of troops, the arrangements in connexion with the Royal Visit of 1911, and as Secretary to the Company's side of the Conciliation Board's (Locomotive, Permanent Way, and Traffic Departments), have on several occasions been specially recognised by the Directors.

**Mr. H. S. Williams.****Mr. G. T. Phizackerley.**

Mr G. T. Phizackerley commenced at Lancaster as junior clerk on the London and North Western Railway. He later passed an examination for a senior clerkship and as a result was transferred to the district superintendent's office at Manchester. From here he was transferred to the district superintendent's office at Euston, and passing through various grades to chief clerk became assistant district superintendent. He was appointed district superintendent of Swansea and Central Wales district in January 1909, and promoted to take charge of the Chester and Holyhead district in July 1910.

NORTH WALES EGG AND POULTRY DEMONSTRATION TRAIN,

April 23 to May 6, 1913.

EQUIPMENT OF VANS.

MODELS OF POULTRY HOUSES, ON A 3 INCH TO 1 FOOT SCALE.—These indicate various forms suitable for use on farms and small holdings, several of which are of what is known as the open-fronted type, by which is meant that there is a free ventilation of air.

(Supplied by Mr. Randolph Meech, of Poole, and Mr. W. Tamlin, of Twickenham.)

TRAP NEST, FOR THE PURPOSE OF DETERMINING THE INDIVIDUAL PRODUCTIVENESS OF EACH HEN, WITH A VIEW TO ELIMINATION OF THE BAD LAYERS.—The hen when entering the nest to lay cannot get out until she is liberated, when the chart is marked.

(Trap Nest supplied by Mr. W. Tamlin, of Poole; Charts by *Illustrated Poultry Record*, Tudor Street, E.C.)

MARKING RINGS.—When trap nests are used it is necessary to mark each hen. These coloured rings are so arranged that every hen is easily distinguished for recording by attendant.

Supplied by Hills' Rubber Co., Ltd., of Reading.)

INCUBATOR AND BROODERS.—Space could only be found for one incubator, and that exhibited is the famous Hearson, upon which so many others have been modelled.

(Supplied by Messrs. Chas. Hearson and Co., Regent Street, London, W.)

Of brooders there are four displayed showing different makes. Two of the larger are heated and one is on what is known as the Fireless principle, in which there is no applied heat. One other, the "Metal Hen," is suitable for smaller broods.

(Supplied by Messrs. Chas. Hearson and Son, Regent Street, W.; the Dairy Outfit Co., Pentonville Road, N.; Mr. Randolph Meech, of Poole; and Mr. Robt. Miller, of Denny, N.B.)

CHICK BOXES.—The sale of day-old chicks is a large and growing business. Boxes in wood and cardboard are displayed.

(Supplied by the Dairy Outfit Co., of Pentonville, N., and Mr. T. P. Bethell, of Liverpool.)

WIRE NETTING.—Specimens of various makes of poultry netting and stakes.

(Supplied by Messrs. David and Co., Cardiff.)

BONE CUTTER.—A newly invented crusher, which by a specially designed series of cutters on a drum simplifies the work and reduces labour required.

(Supplied by Mr. C. F. Hilscher, 116, Whittiam Road, Sheffield.)

PREPARATION OF TABLE POULTRY.—In this section are shown—

(1) Cages in which the fowls undergoing the process of fattening are confined, as used in Sussex.

(2) Shaping Board, by means of which the birds after killing and plucking are given the appearance required on the best markets.

(Supplied by Mr. Percy Hyde, of Hailsham, Sussex.)

(3) Cramming Machine for the forced feeding of chickens.

(Supplied by Messrs. Chas. Hearson and Co., Regent Street, W.)

EXHIBIT OF DEAD FOWLS.—Here are birds of the quality required on, and prepared for, the best markets. These include Surrey fowls, spring chickens, trough fed and crammed, and American chilled fowls. The methods of tying down and of packing are demonstrated.

EXHIBIT OF EGGS.—In order to show the competition which home producers have to meet, a large display is made of cases of eggs from various countries, in which the methods of packing adopted are demonstrated. These include English, Irish, Danish, French, Italian and Russian.

As size of eggs is very important in regard to



Mr. G. T. Phizackerley.

market values, a novel and suggestive series of egg barometers is shown. Six wire baskets of identical size are provided holding exactly sixty eggs, weighing 18 lb. per 120. One of these contains eggs of that size, and the other five have respectively sixty 17 lb., 16 lb., 15 lb., 14 lb. and 13 lb. eggs, the gradations in total bulk being evident at a glance.

TESTING EGGS.—The importance of careful testing of eggs to determine quality has not been fully recognised. A section of one van has been made to form a large testing room, wherein are lamps of various makes, some of which are operated with

the electric light, by means of which the system adopted is fully demonstrated. In this way new-laid eggs, as distinct from what are known as "spots," "rots," "cracks," "broken yolks," "developed germs," and "stales," can be discerned through the shells. Thus the quality and, therefore, the value is at once determined.

A novelty is a testing table, which if completed would be circular. Perforated trays are fitted, below which are powerful electric lamps and reflector, so that the condition of the eggs can be immediately discerned. At one side is a testing compartment, which would be entirely enclosed in the complete apparatus, the operator in which, when he has finished each tray, turns the table, the eggs pass outside and are handled by others, another lot coming before him. This is a Dutch idea, the object of which is to facilitate and expedite the work of testing.

(Testing lamps and apparatus supplied by the Dairy Outfit Co., Pentonville, N.; Messrs. C. Hearson and Co., Regent Street, W.; and the Street Collecting Depot, Somerset.)

EGG BOXES.—In this country returnable boxes are universally used. A series of these of various makes, in which simplicity of unpacking as well as packing is kept in view, is exhibited.

(Supplied by Mr. T. P. Bethell, of Liverpool; the Dairy Outfit Co., of Pentonville, N.; Mr. James Marshall, of Aberdeen; Messrs. Robertson's Patents, Limited, of Goswell Road, E.C.; and Street Collecting Depot, Limited, Somerset.)

DISINFECTION.—The cars are disinfected by Izal preparations supplied by Messrs. Newton, Chambers and Co., of Thorncliffe, near Sheffield.

PHOTOGRAPHS AND DIAGRAMS.—The vans are decorated by a very fine array of enlarged photographs, inclusive of a remarkable series (by Mr. C. Hearson) showing the development of the embryo, by drawings of breeds of fowls, and by tables indicative of possible developments in North Wales, prepared specially by Mr. Edward Brown, F.L.S., director of the train.

LEAFLETS.—Books of poultry leaflets in English and Welsh are distributed freely to visitors.

A HIGHLY SUCCESSFUL EGG COLLECTING SOCIETY.

Framlingham and District Agricultural Co-operative Society, Ltd.

By E. G. WARREN (*Secretary*).



FRAMLINGHAM, with its historical Castle and grand old church, containing several tombs of the Howard family, together with the renowned "*Flodden Field Helmet*," seems to have awakened out of its long sleep into which it fell in Elizabeth's time. In its now purely agricultural days it is famous as the home of the most successful egg collecting society in England. This pioneer society of Suffolk commenced operations in August, 1903, under the auspices of the Agricultural Organisation Society, and the National Poultry Organisation Society, by specialising on eggs.

The motto of the committee was to hasten slowly, and this procedure has succeeded beyond expectations.

At the end of the first year of working there were 114 members holding 1600 shares, with sales amounting to £5,050 and a collection of 453,079 eggs. The figures read at the recent Annual Meeting for 1912 were, 643 members, 6167 shares, £29,038 sales, and a collection of 4,666,920 eggs!!! The society has extensive premises costing about £1,100, which has now been reduced to £467 10s. It has 7 (seven) depots with vans making daily collections. Great care is taken in the appointment of an agent, and to see that his premises are near a railway station, to prevent waste of

time and horseflesh in carting eggs to the station after testing. The agents are not paid by commission, but by a fixed wage to cover all expenses, simply from the fact that the same



The offices of the Framlingham Society.

Copyright.

mileage has to be undertaken in November and December (when eggs are scarce), as in April and May (when more plentiful).

Agreeably with the rules 10 per cent. of the nett profits is distributed among the employees, and during March (or last month) no less than

£58 19s. 3d. was so distributed arising out of the profits of 1912.

A record of the condition of the eggs is kept and where the society pays monthly cheques, deductions are made, but when paid for at the door, the agent carries back the "*stales and bad*" to be exchanged on his next visits.

Fines, at the rate of a penny for ten, are inflicted for dirty eggs sent in after a warning. Each member is provided with a small rubber stamp with which to stamp his eggs. Each agent is responsible for collecting, testing, and dispatching of eggs, but at the depots only the petty cash book is kept, except of course the

agent to increase his dispatches to a certain firm, or to undertake a fresh order, agreeably with the quantity in hand.

The success of a society largely depends upon the management committee—Framlingham has never suffered from want of enthusiasm on the part of the committee, Canon Abbey (President) setting a worthy example.

There is a special egg committee (Messrs. W. Chambers and W. S. Pipe), who are fully acquainted with all the main facts and correspondence—thus preventing the society from lapsing into a one mans' business.

To enable cottagers to become members shares are issued at 5/- each, because it is commonly agreed that proportionately more eggs are picked up in cottage homes in the winter months than on farms, because the hens are warmer housed.

Compared with other societies, Framlingham seems to be over capitalised, but the committee are firm believers in calling up all the capital, and paying interest thereon to the members at 5 per cent. rather than having a big overdraft with interest at the bank. The share capital now stands at £1,541, and is very useful in sending the necessary weekly cash to purchase eggs in the several depots. The Stradbroke agent requires anything from £100 to £150 weekly. The Debenham from £80 to £100, and the other depots proportionately at the present time of the year.

Members have confidence in the society, and even outsiders credit the committee with the good work done. It is estimated that about £5,000 went into the pockets of the members in 1912, which amount does not appear in the balance sheet from the enhanced price paid for eggs, as compared with prices paid before the society started.

The society has no representative in London; a penny stamp and a reliable egg with an occasional visit to town, sufficing for the dispatching of nearly 4 $\frac{3}{4}$ millions of eggs in 1912.

In the general management the committee worked out several examples with the idea of purchasing eggs by weight, but taking the 2 oz. standard, it was found that A's and B's eggs weighed more than the 2oz., and as a whole, the cost would be about 5 per cent. more than if bought in the ordinary local way (so many per shilling). With the increased cost, there were still the "smalls" to cope with.

Since 1910 the society has persevered in the preservation of the surplus eggs in April, doubling the quantity in each year, and during last month a special cellar room was built for a further increase this year.



The Secretary of the Society and Author of the interesting and instructive article in this month's issue.

[Copyright.]

collecting and dispatching books. This petty cash book is sent in at the beginning of each month to be checked and summarised, agreeably with the sheets of collection and dispatches sent daily to Framlingham, where all other books are kept and statistics entered. At the end of each month the agent has to take stock to see if the number of eggs in hand tallies with the day book at Framlingham. The day book of each depot shows how many eggs have been collected, dispatched, and remaining on hand every day. This system enables the manager to wire or 'phone to any

It cannot be right, nor should it be allowed, that preserved eggs be palmed off as new laid, and through the President, with the assistance of the Suffolk analyst, a solution has been prepared, which, when applied to the shell of a preserved egg will cause it to "blush," but it will not affect a new-laid egg.

The society though forwarding about 1,200 turkeys at Christmas to London, has not touched the question of fattening or cramming of poultry, because as a whole the district is too bleak and cold in the early spring to rear chickens in the open, but Her Grace Mary Duchess of Hamilton who has a specially erected house and scratching shed (see illustration) at Easton Park near Framlingham, is enabled not only to have a good supply of winter eggs, but to rear early chickens, and to sell at remunerative prices. Her Grace, who is a member of the society, takes a keen interest

too much is made of colour but fancy must be met, and the members are encouraged to breed for *tinted* and *brown* eggs.

The advance of co-operation and enhanced prices are gradually, but very gradually, affecting the winter supply of eggs in England, but still it is a source of congratulation that co-operative efforts are asserting themselves in this respect. Certainly Framlingham shows a good lead, for the number of eggs collected in November and December, 1912, were curiously enough just doubled in each month when compared with those of 1911.

That the society is still forging ahead may be gleaned from the fact that the secretary reported at the committee's meeting in April, a collection of 1,284,018 eggs for the three months ending March 31st, 1913, against 1,006,398 of the corresponding period of 1912, or an increase of 277,620.



The Stradbroke Collector's Van.

[Copyright.]

All the eggs upon the van, numbering 6,944, were collected on March 31st last.

in her fowls, and may be seen feeding them in the illustration.

Experience having shown that more profit can be obtained in a district such as Framlingham from the production of eggs, than of table poultry, the committee are frequently urging the members to improve their stock by the introduction of pure bred cockerels of good laying strains, either from one of the great poultry yards of England, or by giving the names of those members and others in the district who have good laying breeds. Perhaps

The society paid no less than £861 18s. in 1912 for railway carriage, principally for eggs, and sooner or later the G.E.R. will have to meet the committee in the reduction of the rate to London, which is 30s. 5d. per ton, whereas the rate from France to London is 22s. 6d.

Since 1910 £473 16s. 4d. has been distributed in bonuses among those members *selling* eggs to the society, and *purchasing goods* from them.

To suit the convenience of members the committee purchased a *travelling cider press* in 1911, at the cost of £35. This press is

taken from farm to farm (as required) by the members themselves, who pay a fee of 2d. per gallon for pressing. Framlingham is nothing if not practical and to carry out the wise spirit of co-operation mutual arrangements have been entered into with the Eastern Counties Farmer's Co-operative Association, respecting the prices

experiments which have been carried out during the past four or five years at the suggestion, and under the supervision of Mr. Hugh H. Aitken, M.A., Chryston, near Glasgow, and which he has communicated to the Board, will prove of interest.

These tests were carried out on several farms where poultry were kept under fair average conditions, but where the birds were nevertheless troubled more or less during the whole year with fleas, lice, and mites. The method adopted for getting rid of these pests was as follows:—Solutions of commercial disinfectants, made up to double the strength recommended for ordinary domestic use, were applied, by means of a watering can fitted with a fine rose, to the inside of the house, the woodwork and soil of the runs, and to the dust bath. This treatment was carried out weekly. No appreciable improvement was noticed in the condition of the birds at first, but, after a period varying from six weeks to two months from the time of the first application, examination of the birds showed that the parasites were greatly reduced in numbers, and that they gradually disappeared. The stock became healthier in appearance, and the egg-production, as compared with that of the previous years, showed an average increase of 15 per cent. One cottager who adopted this method of disinfection, calculated, on the basis of his previous egg records, that the expenditure of 2s. on disinfectants had increased his receipts from eggs by 20s. to 24s. in the year.

In one case the disinfectant was used at a farm where gapes had yearly caused a great deal of trouble in spring; the result was that last year the chickens were practically free from this pest. Wherever young birds are being reared the soil may with advantage be sprayed once or twice with disinfectants. Old coops should also be disinfected before use. Such treatment, however, is not necessary if the place occupied is a new one or has previously been free from this parasite.

Further experiments conducted by Mr. Aitken have confirmed the earlier results. Weekly disinfection is found to be necessary at first, but the interval between the operations may be considerably increased when once the birds are in a healthy condition and the houses and runs clean. Regular applications at stated intervals are always necessary, and the frequency of the applications should to some extent be determined by climate and by the season of the year.

Where knapsack sprayers or a good garden syringe are available, the suitability of these appliances for facilitating disinfection by this system will be recognised.

Even when this treatment is carried out, it would still be advisable to apply, twice a year, to the interior of the house, to the nest boxes, and to the woodwork of a covered run, a wash of hot lime and soft soap, as recommended in the Board's leaflet No. 57, or to paint all the parts with creosote.

[Journal of the Board of Agriculture.]



The staff of the Stradbroke Depot. *[Copyright.]*

With the eggs collected on March 25th last, numbering 8111.

to be paid for eggs in the several areas covered, and also by the appointment of a joint committee to regulate and facilitate selling in London or other centres.

THE DISINFECTION OF POULTRY HOUSES AND RUNS.

AT this time of the year it is very important that poultry-keepers should pay particular attention to the use of a suitable method of keeping their stock free from the attacks of parasites, and to the thorough disinfection of poultry houses and runs. The common fowl is known to be subject to attack by a great number of different animal parasites, and the discomfort and injury which the birds suffer from fleas, lice, and mites, as well as from tapeworms, flukes, and threadworms are very considerable, and are often responsible for heavy losses. In this connection the results of some

AMONGST THE STOCK BIRDS.

BY J. STEPHEN HICKS.

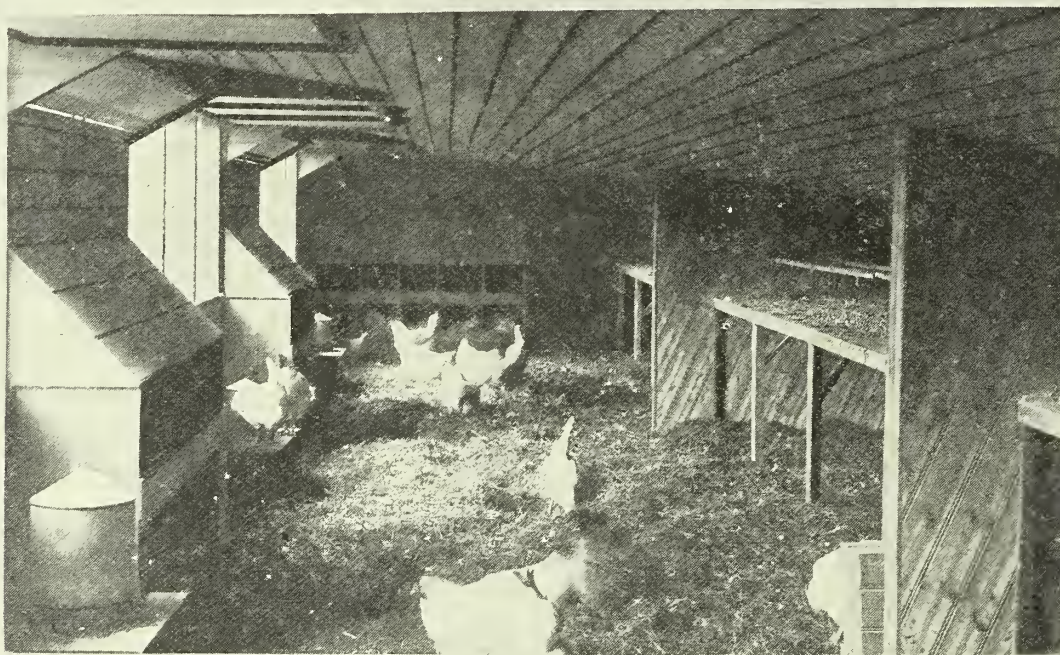


HAVING once mated them up, many people have an idea that it is unnecessary to interfere with their breeding stock until the time comes to separate them again for the season. As a matter of fact, it is highly advisable to examine all the birds thoroughly by handling, at least once every six weeks, when a good many things will possibly come to light that would otherwise have remained hidden until the owner's intelligence was suddenly awakened one morning by the discovery of a hen dead on the nest, or by the hatching out of one chick where there should have been eleven.

It is a fairly simple matter to shut the birds up overnight and examine them carefully next morning

All such items entered up will prove invaluable when you are considering next autumn what hens shall be discarded and what birds to put in the earliest pens, etc. But apart from the notes, it is the condition of the birds themselves that needs looking to, and since there are many little troubles that will quite possibly be discovered in incipient or developed stages, it will be best if we consider each one separately.

First and foremost, what is the condition (*i.e.*, the weight) of the stock birds? A hen in full lay should, of course, be plump and solid to the touch, but she should not be loosefleshed and flabby, with an over-large unwieldy stern, for if she is she cannot produce the healthiest chicks (being too fat



Interior of Scratching Shed belonging to Her Grace, Mary, the Duchess of Hamilton, who is a keen supporter of the Framlingham Society. *[Copyright.]*

every now and then. We will take it that every bird bears a leg ring with a distinguishing number, and when making this examination it will be extremely useful another season if any remarks of interest or importance are entered in a notebook against the hen or cock's numbers. One might, for example, have a very good looking hen laying a mis-shapen egg, or another that never seems to quite get through her moult, a third which, though elderly, always produces a very early hatch of eggs, a fourth perpetually going broody; while this cock fertilises poorly in December, but improves in January, that one hardly feeds at all while with the hens, and so forth.

internally), and may very likely come to grief in due course with a soft-shelled or broken egg. To remedy this state of things, do not be too drastic, immediately cutting down the food supply by half and administering large doses of castor oil; rather go about things gradually, making the birds work for a slightly diminished ration, given in three portions daily, and widely scattered or buried, and providing a mild aperient by means of a small dose of Epsom salts in the drinking water every other day for a week, or by dusting flowers of sulphur into the mash, or by the addition of plenty of boiled cabbage in the soft food. Either of these

methods will soon put things right and will not diminish the egg supply.

Birds that are, on the other hand, too light are either so constitutionally, in which case they had best be removed altogether from the breeding pen, or else have been underfed or poorly nourished by the food supplied; a slight increase in the quantity or quality of the rations will soon decide the question. This, of course, refers to females, for in three cases out of four, a cock, if he is any good at all, gets insufficient nourishment while amongst his mates. Hens in full lay are extraordinarily ravenous, and the gallant male is usually fussing round them while the food is being distributed. The practice of feeding the cock separately is not nearly common enough, though with experienced breeders it is almost a *sine qua non*. It should be sufficient if he is kept shut up in the scratching-shed and fed liberally, being let out about eleven a.m., when he will be found to be all the more vigorous for partaking of his breakfast alone. Half the reports we hear of infertility are due in reality to the fact that the male birds are in poor condition, a scantily-nourished cock being unable to produce strong germs. So much then for the condition, poor or gross, of the stock, though there is certainly some connexion between condition and lice, for it is noticeable that a very clumsy fat hen is often overrun with these insects, and frequently so, too, is a very lean creature (though in the latter case it is quite likely that the lice are a contributory factor to the leanness). In any case a hen in robust health, full lay, and hard condition generally manages to keep herself clean with frequent dust baths, and the use of insect powder becomes unnecessary, but where the examination (chiefly of the feathers below the vent) proclaims a numerous population of undesirable aliens, the Keating tin must be brought freely into play; in cases where many lice are about a second dusting at the end of a week will be advisable, since a new crop will have hatched out in the meantime.

Apart from insects or condition, an examination of the vent itself is desirable, for it sometimes happens (though luckily not frequently) that a broken egg or something else wrong within the hen's oviduct has set up inflammation, ultimately resulting in ventgleet or cloacitis. This complaint is readily distinguishable by the appearance of dark and evil-smelling sores around the exterior and interior of the vent, while the droppings usually contaminate the feathers just below. The unfortunate part of cloacitis is that the male bird gets it himself and immediately affects the other inmates of the pen. Luckily, it is not very difficult to cure if prompt measures are taken, and the male, together with the worst hens, isolated and treated as follows: The feathers round and below the vent should be cut short and afterwards burned, and the affected part cleansed twice daily, at first with a strong solution of Condyl's fluid, or IZAL fluid, the matter and sores being "dapped" gently with a clean rag dipped in the disinfectant, until they are

as clean as possible, when the whole area just around should be anointed with iodoform ointment. Care and perseverance will usually bring about a complete cure inside of a month, unless the complaint has got a thorough hold and the sores extend right into the wretched birds' interiors, when it will probably be best to put the worst cases out of their misery.

Cocks possessing long or particularly sharp spurs are liable to injure their mates after they have been together for some little while, and it is extraordinary how, when severely wounded on the flanks in this way, a hen will generally display no outward traces of anything amiss whatsoever, but if left alone is suddenly found one morning dead with great festering wounds on either flank, sometimes penetrating right into her intestines. It will naturally be seen how the cock's daily attentions ever aggravate and dirty the wound that probably originated in only a slight scratch, and when handling the females in a breeding-pen the feathers covering the "hip" bones should always be turned back to see whether anything of the sort exists. Where there is a sore or a gash it means, of course, immediate separation for the females; they should be brought into training pens and bedded on straw, clean chaff, or other litter that will not be likely to aggravate the place by getting into it. Daily washing and cleansing with disinfectant water and anointing with carbolic vaseline or boracic ointment will soon bring about a change for the better, and the wound will gradually heal over by itself, though the bird should not be returned to the pens until the last scab has disappeared. In extreme cases it may be necessary to sew the torn edges of the skin together with silk or horsehair, but this should not be done until the flesh within has had time to recover somewhat and all inflammation and discharge has ceased.

Poultry in Switzerland.

The Commercial Intelligence Branch of the Board of Trade is informed that there is a demand in Switzerland for high-class English poultry. It appears that very few poultry are kept in that country although the consumption of eggs and poultry is very great owing to the large number of visitors. As a consequence, great quantities of these commodities have to be imported, the better qualities mostly arriving from France and the inferior qualities from Italy. So far as the former are concerned, an increased demand has not been met by larger supplies. The season of greatest demand extends from July to October, the time when the birds are plentiful and prices are falling in the English market. Some trial shipments of Sussex chickens were sent to Switzerland last summer, and when the consignments arrived in good condition, the purchasers found they were superior to all others and expressed a desire that more should be available. It was found, however, that the method of killing adopted led to rapid deterioration in hot weather, and that, therefore, the exporters ran great risk of loss. It is advised that the fowls should be killed by "paletting," then finger drawn, and finally thoroughly cooked, as they would be from two to four days in transit; further, that the birds be graded, wrapped in parchment paper, and delivered to the shippers in London in cases each holding two or three dozen.

ROSECOMBS, PAST AND PRESENT.

BY JOSEPH PETTIPHER.

IT is not my intention in this short article to attempt, systematically, either to review, praise or criticise every variety of fowl that wears a rosecomb, but rather, indiscriminately, to jot down a few remarks and reminiscences which may possibly prove interesting at a period when there



Dr. S. E. Dunkin.

is not only a tendency to revive some of the old, and for a time almost forgotten breeds, but also to introduce the rose comb on birds that hitherto had only been recognised as standard breeds with a single comb. We frequently hear it stated that rosecombs are more popular in America in consequence of their less susceptibility to frost-bite in their more severe winters, and doubtless this is so. But frost-bitten combs are by no means unknown in England, especially when we happen to experience an unusually severe spell of cold weather, and though single combs may not be bitten down so severely here as in the States, there are, I opine, few of us who have kept them for any length of time who have not experienced trouble in that direction. We have suffered the penalty of clear eggs just at a critical time when a biting north-easter came along in March almost suddenly, turning the large upright comb of the male bird from brilliant red into blue-black, and suddenly putting a stop to the fecundity that a few days before had been all that could be desired.

Without raising the question of dubbing single combed birds for exhibition (a practice as everyone knows confined to game varieties) there can be no

denying that with many of the large single-combed birds, such as the Minorca and the Leghorn, it is often a necessity to dub birds for the breeding pen. This practice may possibly be most frequently necessary in exhibition strains, but, as a recent controversy has conclusively proved, there are often cases where it also has necessarily to be practised in utility yards. Anyone who has kept both rose and single combed birds at the same time during a severe spell of wintry weather must have noticed the advantage in both sexes possessed by the rosecombs under such conditions.

The foregoing is, however, only one point in favour of rosecombed fowls. Another appears to lie in the fact that taken as a whole and viewed from a utility egg-production standpoint, rose-combed varieties frequently prove themselves the better layers. Of this I think we have instances both in the past and in the present. This notion is evidently gaining ground, with the result that we see at the present time efforts being made in more than one breed, hitherto single combed, to reproduce its duplicate with a rosecomb. The Black Leghorn, Campine, and Ancona are three instances that immediately come to one's mind. And can anyone put forth any sensible reason why breeders who choose to do so should not set about fixing a rosecomb on a similar type in every other respect, save that previously the comb had been a single one? I trow not! both will doubtless have their supporters, but there are just now distinct evidences of an increasing trend in favour of the rosecomb in several breeds, which is likely to increase during the next few years.

Turning up some old records, I find it was in 1878 that I had my first rosecombed White Dorkings, and in 1880 that I first exhibited them. Shortly afterwards I also kept single combed darks and Silver Greys, and I have no hesitation in saying that the rosecombs were decidedly the most prolific layers, both at the age they commenced and also numerically throughout the year. We had no laying contests in those days, but as a comparatively young hand who kept more careful records than one finds time or inclination to do in later years, I can still trace the advantages of the rosecombs. Well do I recollect my fears that a pullet which commenced laying at $4\frac{1}{2}$ months would in consequence not grow as well as I wished her to do, but fortunately they were groundless, for she subsequently won me my first cup at the Palace.

So much for a past instance of the prolificacy of rosecombs. A little later we come to the Wyandottes, which have subsequently "increased and multiplied exceedingly," and all with rosecombs. And so on down to the present day, when I find myself making a comparison in egg-production between single and rosecomb Anconas. Both varieties are exceptionally good layers of fine large

eggs, but the palm has to be awarded to the latter. It would be easy to adduce similar results with other breeds by other breeders, but there is no necessity to labour the subject or quote from what has recently appeared thereon in the weekly poultry press.

Looking for a moment at the other side of the picture it strikes one as singular that in the vastly popular Orpington the rosecomb never appears as yet to have become a favourite. Even their introducer, who systematically produced Blacks, Buffs, and Whites, with both kinds of combs, failed to popularise the rosecombs in the way he did the singles, and they as yet still remain in the background. But just as rosecombs are rapidly coming to the front in Minorcas, Leghorns, Anconas, etc., so I shall not be surprised if we learn very shortly that at last a similar favour is meted out to the Orpington. Again, take the Barred Plymouth Rock. After immense opposition from a section of single comb breeders the rosecomb Rock has received recognition, and is now not only recognised as a standard breed but I have heard of a number of cases where it is highly favoured as a layer.

The Campine is another old single-combed breed whose votaries claim for it a 400 year pedigree in its native land. In England, at all events, it is perhaps the latest to come under the rosecombing process. We may very well pit it against the White Dorking as the "present" to the "past." In order to do so there will be found accompanying these rambling notes a reproduction of photos of both Dr. Dunkin and a cockerel he has bred, together with an ideal picture of White Dorkings. Dr. Dunkin, the newly elected President of the Campine Club, is a keen fancier, not unknown in connexion with other breeds, but perhaps best known as an orthodox single combed Campine breeder and exhibitor, who, happening to have a bird "sport" with a rosecomb, he—fancier-like—conceived the notion of perpetuating the comb, and at the same time retaining all the other standard characteristics. How well he has succeeded is evidenced by the photo reproduced, and also by the fact that he recently exhibited three generations of rosecombs, side by side in the show pen. The Campine has made rapid strides in popular favour in this country during the past few years, and is apparently also catching on very much in America and Canada. It is only in conformity with other evidences to assume that across the Atlantic the preference for a rosecomb is likely to accrue to the Campine as it has done to other breeds, whilst there is no reason to doubt that it will also come in for its share of favour in England.

The illustration of White Dorkings is a reproduction of an ideal pair, drawn by Ludlow for the standard of the now defunct White Dorking Club, at the time when the breed was at the zenith of its popularity. Here again there are marked signs of a revival, with every prospect of the return

to favour of what was at one time the best all-round fowl of its day.

A word, too, must be said about the rosecomb Black Minorca, which Northup in the States, and Webster in England, have pioneered so energetically that it has come to be largely favoured in both countries. How the Yankee strain was formulated I am not sure, but Mr. R. W. Webster founded his own, crossing in old established breeds, and making separate matings to cultivate distinct strains which were subsequently brought together again. I believe I am correct in stating that Mr. Webster makes no secret of the fact that other breeds were used. And *why should he?* I think it very often happens that too much fuss is made about the use of only pure blood when a sub-variety of a breed is introduced. How should we have got the Wyandotte and others, one might mention, if that course had always been adhered to? I am aware

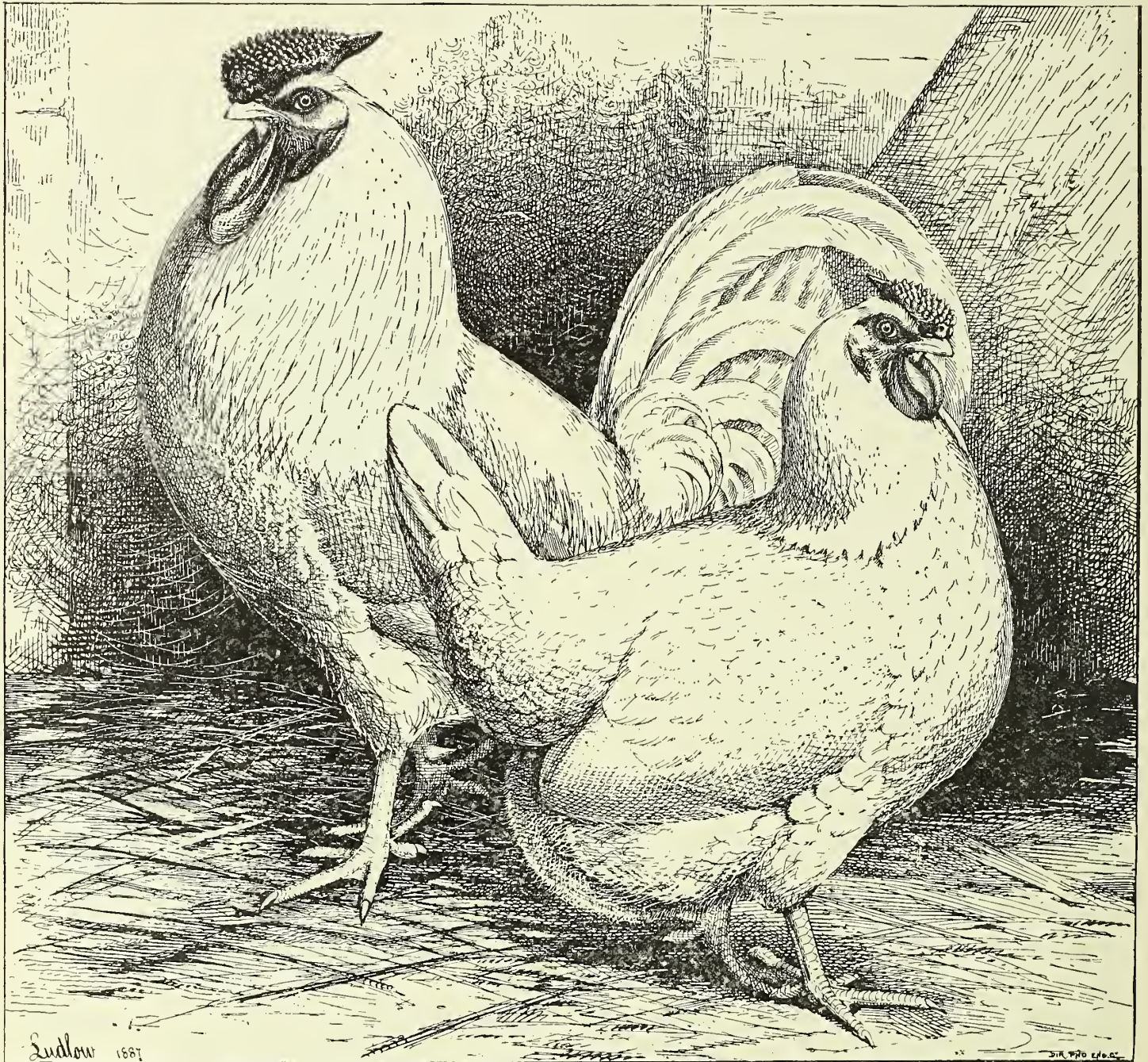


**Rosecomb Campine Cockerel, bred by the originator—
Dr. S. E. Dunkin.**

the question is a somewhat controversial one, and that it savours much of the old proverb of "shaking the red rag before the bull" in some varieties to hint that alien blood was used in their make up. After all it *has* been done, in most cases with undoubted advantage, and it might as well be admitted. Granted the aim should be to breed to type with certain additions deemed to be improvements, such as a rosecomb for instance, but there is every justification for the grafting in of other breeds during the process, and in no new breed that

I think of, have the advantages of judicious and systematic crossing been more evident than in the rosecomb Black Minorca. It may very well happen, as it did in the case of both the rosecombed Rock and Campine, that a "sport" originated the idea, and laid the foundation, but it is quite possible that subsequent crosses, judiciously made, may prove of the utmost advantage both for

production. The Derbyshire Redcap is another instance of the rosecombs of the past, a popular favourite with a past generation of poultry keepers destined to again rise high in favour. If only Hamburg breeders would incline to those outcrosses above referred to, so necessary to bring their variety up to modern utility requirements, we might once again see this very handsome breed as popular as



IDEAL WHITE DORKINGS. (See article, Rosecombs, Past and Present).

arriving at a typical standard and also for the retention and improvement of utility properties.

Turning to the Leghorn breed, if perhaps we except the rosecomb Blacks, we find our American cousins much ahead in the matter of rosecombs. This, however, will probably see a vast change in the near future. Already I hear whispers of rosecomb progress in more than one variety of Leghorns, and especially in Whites, where they are being bred of a utility type specially for egg-

it used to be half a century ago.

I have no special axe to grind for the rosecomb. I do not suggest, or for a moment suppose, that all single combed breeds are ever likely to be wiped out of existence. I should be very sorry to imagine such a thing possible, but it appears to me undeniable that in very many instances there are undoubted advantages to be claimed for a rosecomb in almost every breed. That there are any disadvantages I have yet to learn.

EXTREMES IN POULTRY-KEEPING.

BY FRED W. PARTON (*the University, Leeds*).

XTREMISTS are mostly associated with religion and politics, but as a matter of fact they may be found in every walk of life, to a greater or lesser degree, and poultry keepers are no exception. There are those who go to great extremes in one direction or another in their methods of management. It is certainly inadvisable to do so, and the mode of procedure that tends to the greatest success is to modify one's methods according to existing circumstances. Instead of this there are men with cast-iron ideas about certain things, and nothing will convince them that they are wrong. All views expressed by others, which are not strictly in accord with those held by themselves, are ridiculed. For instance, I know some of the most successful chicken rearers who never give water to their chickens in the early days of growth, while there are other poultry-keepers, equally as successful, and equally clever at rearing, who give water to the chickens from the very commencement. For either to declare the other to be wrong would simply be absurd. The circumstances must be taken into consideration. It is almost entirely the way in which the chickens are fed that determines whether or not they should have water to drink. If they are fed principally on dry food, then water is an absolute necessity, but if mash is the staple food, and it is mixed moderately moist, then water is not a *sine qua non*—although I prefer it whatever system of feeding is adopted. The extremist, however, whether for or against, will not budge an inch from his preconceived idea, and nothing will convince him that circumstances will upset the soundest theories that are based upon general principle.

Probably there are more extremists in feeding fowls than in any other detail of management. There are those who roundly abuse Indian corn, and condemn it, not only as worthless, but positively as a danger to the fowls. Again there are many who hardly use anything else but Indian corn, and certainly if their statements are authentic the egg yield is wonderful. However, both forms of bigotry—this word expresses it better than any other—are bad. Indian corn has its good and its bad qualities. In winter it is excellent, in summer it is injurious. For chickens it is better than it is for old stock. It is very good in cold, exposed places; but it can be dispensed with under more congenial conditions; it may be given in much larger quantities when fowls are kept on a heavy clay soil than if the soil is light and of a sandy nature, since under the former conditions the birds require more heating matter. In addition they can eliminate more fat, and in these two elements Indian corn is particularly strong. We have in this connexion ample proof that methods must be modified according to the existing conditions and

attendant circumstances, and the methods that would excellently suit one man might be quite fatal to his neighbour.

Every new departure finds its extremists, the latest being the intensive system of poultry culture. There are many strongly prejudiced in favour of the system, while there are others equally strong in its condemnation. Let the man whose conditions only allow of intensive culture adopt the system, while the man who is more fortunately placed as to the extent of his land may adopt either method he prefers. The intensive system has much to be said in its favour, notably the fact that undoubtedly more winter eggs will be secured if the fowls are given a roomy open-fronted shed, with plenty of clean and dry scratching material, since protection during wet, cold, and windy weather is a wonderful help in the way of winter egg-production. A further advantage lies in the fact that labour is considerably economised, and this alone is an extremely important matter, especially on establishments where poultry is the main, or perhaps the only crop, in consequence of which all, or practically all, the expense is chargeable to the fowls. On the other hand, there are objections to the system. Probably the chief objection is that of breeding from birds kept under these conditions. This, however, is a moot point, and one with which we are not at present concerned more than to have stated the objection.

Again there is the question of purity of breed where different varieties are kept. It may be suggested that breeding pens be erected and the stock birds treated in the ordinary way, while only the general laying flock be kept in sheds. Were this plan adopted, which is excellent in every sense of the word, the system would not be intensive. It must be further remembered that there are methods and methods of so-called intensive culture, so that there is an enormous field for speculation, and it is unwise to be extreme either for or against without qualifying both objections and advantages.

Extremists are also plentiful both in favour and disfavour of the dry system of chicken feeding. The fireless brooder has its adherents and also its antagonists. The object for which the chickens are destined is to be regarded before deciding the former point, and the part of the country and the time of year are two highly important governing factors as to the second. Thus again it is unwise to brush aside either of these matters as wrong, since both are right under certain conditions.

Probably the most difficult and objectionable extremist is the man who has only kept one or two breeds, which have always given him satisfactory results. Therefore, and very naturally so, he is loud in their praise. The objection is that he will never admit that any other than his particular favourite possesses any good quality.

FANCIERS AND FANCY MATTERS.

BY WILLIAM W. BROOMHEAD.

Mr. Holmes Hunt's Red Orpingtons.

Being recently in Sussex in the neighbourhood of Heathfield—"Heffeld" as the natives term it—I took train to Hellingly and paid a long promised visit to the Brook House Poultry Farm, where Mr. W. Holmes Hunt is busy originating his Red Orpingtons. After a tour round the farm and a close inspection of the three generations of this new variety, I was agreeably surprised at the splendid advance that has been made with it; and, if all goes well, it looks as if the Red Orpington will get something of a boom when the autumn and winter show season opens. This year's stock, some of which was hatched early in January, is decidedly promising, since while the colour is showing well, many of the chickens are ideal Orpingtons as regards their type and size. The earliest were certainly very well grown for their age, and while this is proof that Mr. Hunt knows how to rear chickens, it is a sure sign that the Red is a particularly good variety for the production of early table birds for the best markets.

As regards the variety's laying powers, I was assured that Brook House Poultry Farm had not been short of eggs from the Reds all through the winter, while during my visit the birds in the pens were producing them in goodly numbers. The Red is not the only variety of the Orpington kept by Mr. Hunt, since he has also some good matings of Whites, Blacks, Buffs, Blues, and Spangled. In addition he has a good stock of White and Black Leghorns, White Wyandottes, and Light and Speckled Sussex, as well as Aylesbury, and Buff and Blue Orpington ducks, while he had just gone in for a few geese. The runs at Brook House are extensive, and the pasturage is of the best, hence the stock is especially hardy. Hundreds of chickens and ducklings are reared in the season; and although natural methods are followed, artificial hatching and rearing are not overlooked. As a matter of fact these are carried out on a somewhat extensive scale; and in addition to a special incubator house there are two very big brooder houses on the farm.

Fancy points are carefully studied, since, like many another, Mr. Hunt prefers a good-looking bird to a mongrel. He does not, however, exhibit to any great extent, and so, while breeding his fowls to standard, he does not overlook the utility side of poultry-keeping. His aim is to combine good laying properties with early maturity for market, and this he has certainly succeeded in doing with the Red Orpington. He finds it a most profitable branch to rear early chickens for the huckster; and one fatterer in the district takes as many chickens as can be spared from Brook House. There is, too, a good call for new-laid eggs, while Mr. Hunt does a brisk trade in eggs for sitting, in day-old chickens, and stock birds.

The Blue Orpington Duck Club.

In last month's ILLUSTRATED POULTRY RECORD, when commenting on the fact that certain breeders and fanciers are anxious to form a club for Blue Orpington ducks, I suggested that they should instead join the Orpington Duck Club, which I understood catered for both Buffs and Blues. Since then, however, I have heard that at the general meeting of the club last year it was proposed and carried unanimously that the Blue should be dropped; and this action was confirmed by a postal election of all its members. Writing to me on the subject the hon. secretary (Mr. A. E. Brown, Staplehurst, Kent) says "The main reason, I think, was due to the poor support accorded to guaranteed Blue classes, and the consequent financial loss, the club having dropped about £10 on Blues during the last few years, whereas the total number of members interested in the variety was only about six."

In the circumstances, therefore, it is only natural that breeders of Blue Orpington ducks should endeavour to form a club for the variety, and so look after it. Mr. W. Holmes Hunt (of Brook House, Hellingly, Sussex) is acting as hon. secretary *pro tem*, of the new club, and he is being supported by Mr. Art. C. Gilbert, Mr. Moysey, and other fanciers. The other club has, of course, resumed its original title, viz., The Buff Orpington Duck Club, the one Mr. Gilbert gave it when he brought it into being a few years ago.

A Few Notes on Bantams.

Laying classes for bantams! The move is certainly a novel one, and yet on the authority of Mr. J. F. Entwisle in a recent issue of *Poultry* I hear that at some shows this season classes are to be provided for the likeliest cross-bred hen for laying purposes, confined to bantams. Why the classes, however, are for cross-bred birds, I cannot see, since many pure breeds of bantams are by no means poor layers. Frizzles, for instance, are particularly good egg-producers, and so are Wyandotte, Plymouth Rock, and Polish bantams; and eggs from matured hens of these breeds are about as big as those laid by ordinary large pullets in their early productive period. I have, too, had Spangled Old English Game bantam hens of a crack exhibition strain, which were really splendid winter layers, their eggs being of a most suitable size for children as well as for adults who are not partial to big eggs. This latter breed is a very hardy one, and the Spangles I kept roosted all through the year, and during one very severe winter, in a small open-fronted shed.

The wonder is that more people do not keep bantams, even for utility. They are small birds, and small eaters, while as a rule their eggs are not to be despised on account of size. A pen can be kept where there is scarcely room for a couple of

large fowls, and they are not difficult birds to manage. Moreover, the bantam fancy is increasing, and at most shows nowadays classes are provided for the "wee yuns." In this direction, too, they cost little for carriage to and from an exhibition, while the prize-money is generally on the same scale as that offered for large poultry. All things considered, therefore, bantams can be kept rather more profitably than other kinds of poultry.

It is not often that one hears of new breeds of bantams. At present there appears to be a vogue for the Belgians, such as the d'Anvers and d'Uccle, which are somewhat on the lines of our Booted, though some are clean-legged. They are certainly of charming colours, particularly the porcelain

contemplating going in for it will fight shy of it. The bleaching idea was probably the first "fly in the ointment"; but others have followed, and the mention in a recent case of White Orpingtons having deteriorated in value to the extent of one hundred per cent.—they could scarcely go any lower—has hardly tended to induce waverers to put confidence in the variety. It is well, therefore, that the White Orpington Club members are bestirring themselves. One good thing they did at a recent meeting was to revise their scale of points, so that now type stands first with thirty, while colour is given only twenty, which is, need I add, as it should be.

As I mentioned in last month's issue, the club



THE DEBENHAM COLLECTING VAN. (see page 398-401)

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and the mille fleur; and a class for Booted or Belgian at the recent Otley Show proved a great attraction. A new breed which is likely to be exhibited this season is the White Faverolles, and another is the White Orpington (both rose combed and single combed). These two are already in the making, in fact well upon the way to completion; and, as might be expected, they are being originated by Mr. C. Thellusson (at Brodsworth Hall, Doncaster), who has done so much to bring both varieties in large fowls prominently before the poultry-loving public. There is certainly a great future for Faverolles and Orpington bantams.

White Orpingtons.

Of late, one way and another, so many unkind things have been said of the White Orpington that those who have the good of the variety at heart are concerned lest budding fanciers who have been

contemplates issuing a year-book; but since I have heard nothing of this publication up to the time of going to press, I presume that those responsible for it are getting busy with the 1914 annual. However, there is no reason why the White Orpington should not regain its high position this season. It will not be for want of an effort, since, of late, two or three breeders of the variety have been writing to the Press showing of what it is capable as a money-making fowl. A ready sale for January chickens this year at 21 shillings each when about four weeks old, as one fancier declared, sounds like raking in the shekels.

The Harry Wallis Memorial.

The Poultry Club Council has decided to appeal for funds for a memorial to the late Mr. Harry Wallis; and at its April meeting the subject was carefully discussed and a committee appointed fully

to consider the matter. This committee consists of the Rev. T. W. Sturges, Dr. S. E. Dunkin, Captain R. R. Allen, and Messrs. Richard Watson, L. C. Verrey, S. W. Thomas, G. T. Drake, John Horn, P. H. Bayliss, W. Clarke, and T. Threlford, the last named (of 2, St. Luke's Square, Victoria Docks, London, E.) acting as hon. secretary. In view of the notes appearing in last month's ILLUSTRATED POULTRY RECORD there is no need again to refer to Mr. Wallis's services to the Fancy or to emphasise his personal qualities. It is hoped that every fancier will respond to the appeal, and whatever the sum sent it will be gratefully received in the spirit it is sent, to honour the memory of one of the best of men.

It is early to decide the form the memorial will take, since this will depend on the amount raised; but unless I am greatly mistaken the suggestion that the sum be invested and the interest used to purchase a cup to be won outright each year will be adopted. This cup could be offered at such a show as the International, to be competed for by a different breed or variety each year, so that all in time will be included. The idea is certainly an excellent one and decidedly preferable to purchasing a large trophy which can never be won outright.

Bleaching White Fowls.

Much has been written of late concerning the manner in which some white fowls have been dressed for the show pen, and the general opinion appears to be that all of the best—those which are described as being “dead white” or “as white as driven snow”—have been put through some process of bleaching ere being exhibited. That some birds have been dressed in a manner that is not understood by all fanciers is an undoubted fact, but it is entirely wrong to imagine that any white fowl must of necessity be so treated ere it can be penned without a spot or blemish in its plumage. For years I kept white Wyandottes of two well-known strains, which, although never particularly shaded, and always allowed to run in the open, not only retained their colour but produced chickens of the pleasing dead white. Of course it is well-known that birds of this breed are less liable to sappiness or tanning than, for instance, the white Orpington. Nevertheless, there are white Orpingtons which need no bleaching or special washing to be ready to compete with the best.

In a recent issue of the *Feathered World* there is a letter on the subject which, some readers will imagine, gives the game away. It is amusing, to say the least of it. The first method mentioned is as follows:—After washing the bird in the usual way and absorbing most of the water in the towels, take three parts of peroxide of hydrogen with one part of strong ammonia, mix together and sponge the bird over quickly. Then wrap the bird up with an oiled silk, leaving its head and shanks out free. The idea is that by retaining the gases generated by the two chemicals the bird is bleached,

the gases doing all that is necessary to remove sap or tan. The length of time required to so bleach a bird, it is said, is three minutes or more, but the writer wisely suggests that culls should be so treated ere a valuable bird is put in hand. It is the saving clause, since after doing so I doubt if anyone would be foolish enough to try the process on a show bird. The idea of adding ammonia to peroxide of hydrogen and wrapping the bird up is, not to put too fine a point on it, farcical. What is the benefit of adding ammonia to hydrogen peroxide? I greatly doubt if the correspondent knows the chemical action.

The other way of removing blemishes is given as follows:—Take chloride of lime, one tablespoonful, oxalic acid crystals, two tablespoonfuls, borax, one handful—rather an uncertain quantity this, by the way—and mix together. Put the mixture in a gallon of hot soft water and stir well. Shave up three cakes—again an unknown quantity—of pure white soap and add slowly, stirring all the time. This will make a jelly, which can be put away in sealed cans for future use. Wash the birds in the usual way, using the jelly instead of ordinary soap, and blue can be used in the last water. Go ahead! Chloride of lime, it may be remarked, is a great irritant. Oxalic acid is a deadly poison and is scheduled as such. It is, moreover, very likely to be confused with Epsom salts, and unless it is labelled even professional men are unable to tell the two apart. Of course all these chemicals are useful in bleaching “stuffs,” but it must not be imagined that they will have the same effect on such very delicate things as feathers. It is generally understood in the Fancy that when a bird has been treated with hydrogen peroxide the latter cannot be detected, but let me whisper that it can! Enough of this subject, however, for the time being.

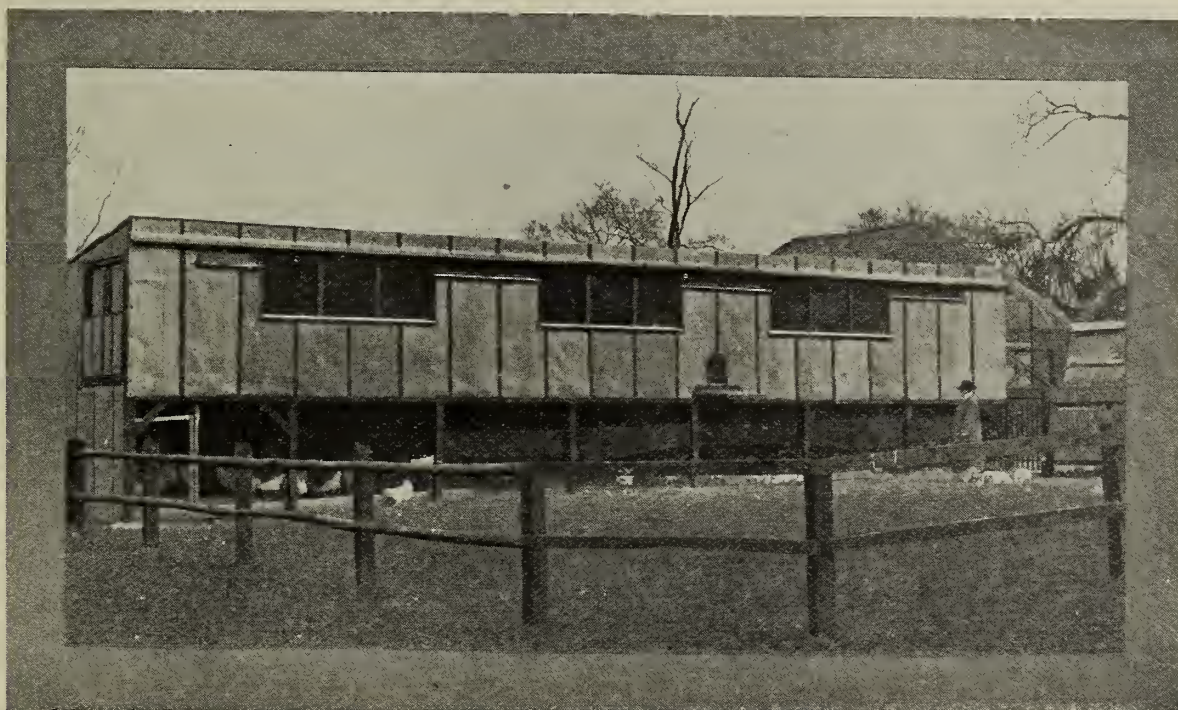
Some Shows.

The summer show season opened well at Otley, Yorks, on May 2. There was a record entry of poultry, and as usual the quality of the exhibits was of a high order. Competition for the Society's six gold medals was very keen. Two of these were awarded to Mr. W. Smith Lambert, the birds winning them being a charming Gold Wyandotte cock and a smart little Black Red Modern Game bantam cock. Messrs. Whitaker and Tootill also secured two of the medals with a beautiful White Orpington hen and a typical White Leghorn cock, while the others went to Mr. Tom Heath's Brown Red Old English Game hen and Mr. G. L. Booth's Black Rosecomb bantam hen, both ideal specimens. Among the most important shows to be held in the near future are the Royal Counties at Windsor from the 10th to the 13th inst., the Royal at Bristol which opens on July 1st and closes on the 5th, and the Great Yorks at York on July 23rd, 24th, and 25th. Other events have been announced, and there is no reason to believe that there will be any falling off in the number of summer shows.

SOME PROPERTIES OF PURE-BREEDS.

Poultry-keeping as a country-house hobby is finding favour in all parts of the country, and the ornamental possibilities of a flock of fowls running in a park or paddock are being realised by many people to whom the mere material advantage of poultry-keeping would not appeal with such force. A short time ago I was present at a show that was opened by the wife of a well-known public man (it was presumably her first visit to a poultry show), and it came to my knowledge that she was so fascinated by the White Wyandottes that she gave an order to a large breeder for ten pullets and a cockerel to run in her park. The beauty of these birds appealed to her, whose ideas regarding poultry had probably up to that time been based upon the degenerate mongrel type one sees running about the roadsides, which, whether they may be useful or not, are certainly not ornamental. Judging from this case, one might surmise that if the general public attended more shows and saw the beautiful varieties that are bred at the present day, there would be more pure-bred fowls kept for ornamental purposes.

classy character of the pure-breds, so that very few people would permit them to occupy a position where they might be seen. Now, however, the pure-bred hen is coming into her own, and with the development of rural industries her beauty is entitling her to be considered as part of the scheme for beautifying of the estate. Not long ago I saw a pretty little country home standing in a miniature park in which were several ornamental white-painted poultry-houses, each tenanted by a flock of beautiful white fowls. Passers-by stopped to comment upon the charming effect, and I have no doubt many have formed plans for adopting some such scheme. White fowls are undoubtedly very beautiful when the setting of green park and trees is as charming as it was in this case, and there is no better variety than the White Wyandotte, whose plumage is relieved by the red face and yellow legs. There are, however, many other colours with which good effects can be created, and it is remarkable how well black fowls look when running upon grass. There is nothing sombre, for instance, about a flock of Black Leghorns, whose large red combs, white lobes, and yellow shanks provide such good contrasts, and for my part I should choose these



The Exterior of one of Her Grace the Duchess of Hamilton's Scratching Sheds. (See page 400) [Copyright.]

Her Grace is seen standing to the right of the photograph.

Ten or a dozen years ago one seldom saw flocks of poultry running about private parks and country-house grounds, for at that time the ornamental properties of the pure-bred fowl were scarcely realised. Flocks of mongrels or cross-breds were generally relegated to the farm premises. They were not nice to look at, and they lacked the

before any of the black-plumaged fowls. A flock of Minorcas, however, is always striking, and both these and the Leghorns possess one great advantage over the whites in that, whilst the latter may become dirty in bad weather, nothing seems to alter the appearance of the black-plumaged birds.

Then there are many brighter-coloured breeds,

prominent among which one may mention the Partridge Wyandotte and the Brown Leghorn. A rich-coloured cock of the former variety is one of the most handsome birds in the poultry-yard, and though the hens, seen at a distance, are of a more sober colour, they are particularly handsome when running on grass. Brown Leghorns have an additional attraction in the form of a large red comb. Black-Red Old English Game may be included in the same class, but in each case the males are more ornamental than the hens.

One of the most pleasing effects I ever saw was produced by a flock of Silver-Pencilled Wyandotte cockerels, a variety that would, I am sure, be more popular for ornamental purposes if it were better known. A prominent breeder had a pen of these birds in the Irish Village at the White City, where they attracted much attention, and though once again the males are far more handsome than the hens, a flock of pullets running with one or two cocks would give a very pleasing effect. Nor can one ignore the claims of Silver-Laced Wyandottes and Barred Plymouth Rocks, two highly ornamental breeds which always look well when running on grass.

There has always been a large measure of popularity for buff breeds, and Buff Orpingtons in particular, and up till the last year or two there were probably more birds of this variety kept for ornamental purposes than any other. A rich coloured Buff Orpington, Buff Rock, or Buff Leghorn makes a fine picture, but a great drawback is the tendency to fade during the summer time, which considerably detracts from the beauty of the birds.

In a large park or field the best effects are produced by allowing the birds to run at liberty, the houses being placed as far apart as space will allow, and by this plan it is possible to keep two or three breeds without intermixing. In a smaller enclosure the number of birds must be limited if they are to run at liberty, or wired runs must be erected to confine them. One plan that I have seen in operation in a four-acre paddock is to have about half a dozen houses dotted about, to each of which is attached an ornamental fence of wire hurdles enclosing about 225 square yards of ground, and each flock is allowed to run at liberty in turn for the whole or part of a day.

It naturally follows that where fowls are kept primarily or partly for ornamental purposes the houses and fences must be in keeping, and though the actual formation of the house is not of such great importance, the painting makes a great difference. For both white and black fowls a white house is the most pleasing, and I remember once seeing a very good effect produced by a house painted white and picked out with black, the inmates, appropriately enough, being Silver Wyandottes. Bright-coloured houses are apt to jar somewhat upon the artistic sense, and, personally, I prefer to stick to white or a serviceable walnut brown for any breed.

REARING TURKEYS.

TURKEYS are to me the most interesting of our domestic varieties of poultry. What is grander in Spring than the strut of the turkey cock as he escorts his hens around the stack-yard or paddock? What more quaint and interesting than the brood of youngsters as they stroll along a hedgerow catching flies or searching for grasshoppers in the long meadow grass, constantly uttering their peculiar cry? In autumn we have the flocks of well-grown youngsters wandering in their own majestic style over the stubble fields, gleaning corn and picking up a few stray insects. This is truly a magnificent sight, especially if the number of the flock runs into three figures; and, finally, we come to winter and Christmas, the last, doubtless, the most familiar, and, to some, the grandest stage of all, judging from a line in an old verse, "For a turkey braised, may the Lord be praised." At any rate, it is an undoubted fact that the turkey, dead or alive, is the king of the poultry world, whether he is gracing the farmyard, the poulterer's shop, the show-bench or the dinner-table.

I will not describe the numerous varieties of turkeys or their specific merits. Suffice it to say that the most widely known are the American (or Mammoth Bronze), the Cambridge Bronze, the Norfolk Black, and the Austrian (or White) Turkey, of which the most popular is undoubtedly the Mammoth Bronze, on account of its size and hardiness. But whichever variety is selected, the object in view is invariably the same, and that is to obtain a well-developed, thick-breasted bird. And now, how is this to be obtained?

The stock birds should be settled in their quarters early in the New Year, great care being taken in their selection. First as to age. A turkey in its wild state does not mature till it is two years old, and a gobbler will retain his supremacy in a flock for four or five years. I prefer, all things considered, two-year-old hens and a cock a year or two older, and, for size, to obtain this in the hens if possible; the larger the better, anything from 18lb. to 24lb., but bearing in mind that the heavier the hen the less eggs she is likely to lay, especially if the extra pounds are attributable to fat. The cock should weigh about 30lb. to 35lb. if in fair condition. I carefully avoid a bird of either sex that does not carry plenty of breast, and one that has a prominent nob on the point of breast-bone. Of course, freedom from any trace of disease or deformity is absolutely essential. One cock can be mated with eight to ten hens. Having selected your stock birds, get them settled in their permanent quarters as soon as possible. A large, roomy, but not draughty, open-fronted shed is a good roosting-place, although an ideal position is a tree selected by the birds themselves in a park. But few breeders are able to allow this owing to risk of losing them by thieves, either two or four-legged.

Eggs may be expected early in March, and as the hen is a particularly shy and timid bird, she will wander a long way to find a suitable nesting-place.

Convenient places should be made up for her near at home to select from. An old barrel lined with leaves and straw, a thatched hurdle or two placed in odd corners, or a few boughs placed against a wall all make excellent places for her to creep under and lay her eggs, which number from about 13 to 35 each batch. It is always advisable to collect the eggs as laid, and to hatch the first batch under ordinary hens, breaking the turkey hen of her broodiness as soon as noticed, when she will re-commence laying in from ten days to a fortnight. Collect these eggs as previously, but the turkey hen may be allowed to hatch them herself, and as the chicks will not appear much before June, her motherly care will be of great assistance to her brood in chilly autumn.

An ordinary hen will not cover more than nine turkey eggs, so it is advisable to put three hens down at once, and then at hatching time you should have two good broods. A turkey hen will cover from 15 to 25 eggs. A quiet place, not too light, should be selected for the hens to sit in. Great care must be taken that the nests are carefully made and kept clean and free from vermin, that the hens have plenty of room, and

very rapidly and cleanly if the eggs are fresh, a whole hatch coming off in five or six hours. The newly-hatched chicks should be left in the nest thirty-six hours, after which time they should be quite strong. Remove hen and chicks to a large, dry, well-ventilated coop with wire-covered run in front and board floor covered with dry chaff or peat moss if early in the season. The coop and run should be placed in a sheltered corner, where plenty of good grass and herbage are obtainable.

The chicks' first food should consist of hard-boiled egg chopped fine and dried off with ground oats or crammings. This food may be given for the first four or five days, varying it with an occasional feed of biscuit-meal and a last feed at night of a reliable dry chick food. After the first few days the egg may be replaced by fine pollard, scalded and dried off with ground oats, or boiled rice dried off with crammings, these foods to be continued for the first three weeks. The chicks must be fed regularly and sparingly every two hours, and although it may not be apparent just now, overfeeding, mind, is fatal, and special attention must also be paid to the regular supply of water, flint grit, and oyster shell. After three



A nearer view of the Scratching Shed depicted on page 411.

[Copyright.]

that they, too, are kept free from vermin. The period of incubation is twenty-eight days. During hatching time the hen should be disturbed as little as possible, for fear of her trampling on the chicks, which are exceedingly weak and feeble when first hatched. Remove the empty shells and allow the hen to come off and feed only if restless. It is best to try and arrange to give her a good feed before the first chick is hatched. Turkey chicks hatch

weeks the interval between the feeds may be increased to three hours; green food in the form of chopped onions or dandelions may be added to the soft food, which may be mixed with skimmed or new milk. Cracked wheat or groats may replace the dry chick food. Vary the foods as much as possible, but do not make any sudden changes. Move the coop and run on to fresh ground daily, and when space and weather will permit allow the

hen to roam about with her chicks after the first week. The hen and chicks should be periodically examined to see that they are all quite free from vermin, which are the cause of many fatalities.

This system of feeding should be continued till the chicks have "shot the red," which they do when from eight to ten weeks old. About this time the hen will be thinking of leaving her rapidly growing chicks, so they should all be moved to a nice dry, well-ventilated, but warm house about 8ft. by 6ft. and 6ft. high at ridge, and mounted on wheels. No perches should be allowed, the floor should be covered with clean dry wheat straw, and here the chicks should be warm enough when the

hen forsakes them. They will now only require four feeds a day. Do not drop off the onions, which give tone to the system. Their evening food may now be whole wheat or good heavy white oats, and as soon as a field of corn is cut and carted, the turkeys should be moved on to the stubbles without delay, and the house moved daily, when they will only require two and probably one feed a day, and their growth will be amazing. Keep them on the stubble as long as there is any corn for them to pick up, or until the ground gets wet and cold; they must then be moved to their winter quarters, and nothing beats a good barn.

C.E.F.

MAMMOTH BROODERS.

By T. F. McGREW, of Scranton, U.S.A.



HERE mammoth incubators are used and where the greater part of all the chicks hatched in these incubators are reared, enormous brooding capacity is necessary.

Even where but one 6,000-egg-capacity machine is used, and where but 600 eggs can be selected each day for hatching, it will require but ten days to fill the incubator. If, perchance, only 50% of the eggs hatch, this would produce 3,000 chicks every 21 days. If 100 chicks are kept in each brooding space it would require thirty of these spaces each three weeks. If each of these spaces are four feet wide, it would mean brooder-house capacity of 120 feet long to accommodate the chicks that would be hatched each month from one of these machines. If but four hatches were made each year, it would require a brooder space 480 feet long or a building 250 feet in length with a double brooding space, that is, one to the right and the other to the left; or, if all were in line, it would require a house 500 feet long.

To handle such enormous capacity special houses must be built, and to keep the cost as small as possible, these houses must be built at little cost; the interior equipment must be as inexpensive as it is possible to have it, and yet gain the best results. Some of these houses are built in single rows, while others are built in double rows, thus providing more brooder space under a single roof than can be had from a single-row system.

In the construction of these brooder houses, heaters that will consume the least amount of coal and provide sufficient heat, must be used. The most modern type of brooding system is hot water pipes passing through a box, a chamber, or a trough, the air passing through the chamber and over the pipes, then up through the heating devices beneath the hover.

A double-row brooding system can be arranged in quite a simple manner. Stoves for heating are located at the end of the brooder house and the

hot water pipes for heating the system extend from the stove through the box to the extreme end of the house. This system includes the flow and the return system pipes. The attendant can lift the wire-screened lid, raise the top of the hover, and examine the little chicks without going inside of the nursery. When it is necessary to go inside the nursery to the exercising floor, the attendant passes through the door shown just above the hover.

A closer inspection of the hover, heater and brooder devices shows how easy it is to raise the lid, remove the sliding board in the front of the brooding space next to the hallway and to brush out all the litter, clean the floor and replace the board. After cleaning, fresh litter should be strewn on the floor and then the top of the hover must be put in proper position. All of this work can be readily and quickly done from the hallway.

When the chicks are quite small they can be watered and fed inside of this smaller brooding space, ventilation being had through the wire screen that covers the door or frame above the hover. As the chicks grow older, and when they are permitted to run out into the open space, the smaller opening shown gives free access in and out from the hover.

Another system that is extensively used is that of individual hovers having a capacity of 100 chicks each. These hovers are made of metal, are very light in construction, and can be carried about from place to place. The illustration shows twenty of them in a building 100 feet long; 2,000 chicks were hovered in this way in a single building; the nursery space about the hover being 5ft. x 8ft., and the attendant going through the house in the rear of the nursery.

In these separate enclosures 100 little chicks will thrive and do well until about two and a half weeks old, when the little doors in the front of the building must be opened and the chicks permitted to run out upon the ground.

When the chicks so raised are about twelve weeks old all the cockerels and the less desirable of the pullets are selected and sold for broilers; only a sufficient number of the very best cockerels being retained for future use. The final culling of the entire flock leaves five or six hundred well-selected pullets to grow to maturity and roost at night within the same building where they were hatched.

The greatest need of the little chick from the beginning is plenty of fresh air, proper ventilation, plenty of exercise, and proper feeding. If these rules are carefully carried out the loss under this system of rearing must be very small, and where 2,000 chicks are kept in a single house in this way they can be readily managed by a single attendant; but where equal numbers are scattered about in colony houses, it would be almost impossible for one attendant to feed and care for them, much less trim and fill the lamps.

These same systems of incubating and brooding are used for ducks, and when it is considered that some farmers hatch more than 150,000 baby chicks and almost as many ducklings in a single year, one can imagine at least the immensity of the proposition and realise the great need of mammoth machines for hatching, and large brooding capacity.

There seems to be an awakening at the present time in poultry matters in the British Isles. We note that the intensive system is being thoroughly tried, and there are whisperings heard of large poultry plants being constructed there. It is to be hoped that care and judgment will be used in the establishment of poultry plants. It will be quite feasible to obtain the best information from those who have had experience, and when mammoth plants are installed in Britain, if installed at all, it will be far better for those who lead the way in this respect to profit by the experience dearly bought by Americans before they establish on a large scale poultry farms for the production of market eggs and table poultry.

Demonstration Train in Oregon.

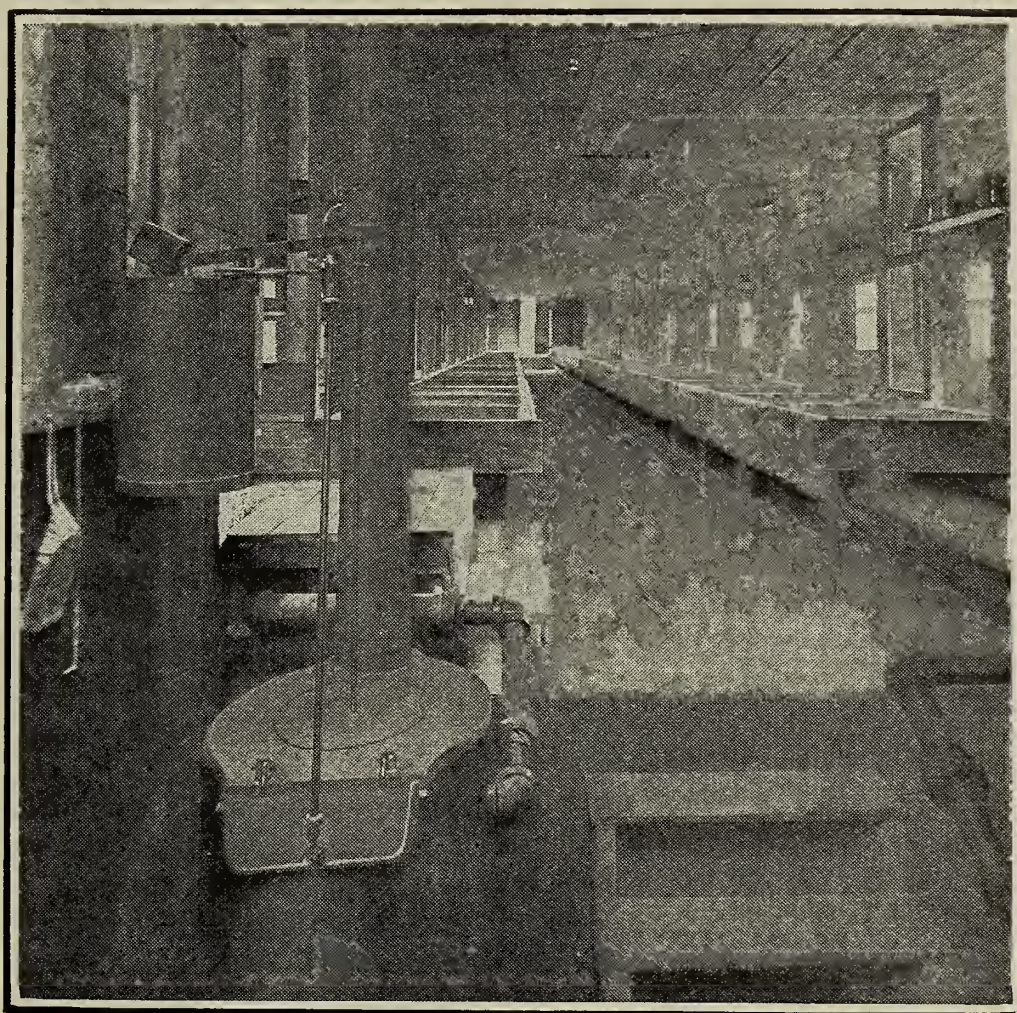
As part of a recent train sent out by the Oregon Agricultural Experiment Station, one fleet wagon carried a Colony poultry house and run, in which was a flock of Plymouth Rocks.

RECENT POULTRY EXPERIMENTS.

(*Maine Agric. Expt. Sta. Bull. 179*).

THIS Bulletin deals in the first place with certain modifications which it was considered desirable to introduce at the station into the methods of feeding the laying pullets.

All adult birds, whether pullets or not, received (a) whole or cracked grains scattered in the litter, (b) the mixture of dry ground grains known as a dry mash. The birds were also given oyster-shell, dry cracked bone, grit, and charcoal, together with



The Candee Mammoth Brooder.

an ample supply of clean water. In addition clover hay was provided. The whole or broken grains were preferred to the dry mash, but while the latter was taken freely, the birds showed no tendency to gorge themselves with it or to become lazy and over-fat. It is also claimed that by feeding a dry mash in hoppers there is none of the mobbing which characterises trough feeding, there is little or no waste, and the amount of labour is considerably reduced. The dry grains were fed

early in the morning, being scattered on the litter, which consisted of a mixture of pine shavings and straw, the amount of whole corn allowed for every 100 hens being four quarts; at ten o'clock they were given in the same way two quarts of wheat and two quarts of oats. This was all the regular feeding which the birds received.

The dry mash formerly used at the station had the following composition:—

Wheat Bran	...	...	...	...	200 lb.
Maize Meal	...	...	...	...	100 "
Middlings	...	...	...	...	100 "
Gluten Meal or Brewers' Grains	...	...	...	...	100 "
Linseed Meal	...	...	...	...	100 "
Beef Scrap	...	...	...	...	100 "

Experience had shown that this mash, containing comparatively large quantities of such concentrated foods as gluten and linseed meal, was rather too rich.

In considering the most desirable modifications to introduce into a new mash it was necessary to take into account the circumstances connected with the transfer of the birds to the laying-houses from the range on which they had grown up, and experience led to the conclusion that this period was a very important one, and that the egg production during the winter was dependent to a large extent on the way in which this transition was made.

It seemed desirable that this change should be effected as gradually as possible, and with this end in view the pullets were transferred from the range soon after September 1st, when they were placed in a house with a freshly seeded yard full of green grass accessible to them, and here they remained until cold weather set in. Thus they were brought from a free range to a restricted range, but with better pasturage on the restricted than on the free range. In order to bring the birds gradually to a rich ration the following modifications were made in the composition of the dry mash:—

First month in laying-house (September):—

Bran	...	...	...	...	300 lb.
Maize Meal	...	...	...	...	100 "
Middlings	...	...	...	...	100 "
Meat Scrap	...	...	...	...	100 "

Second month in laying-house (October):—

Bran	...	...	...	...	200 lb.
Maize Meal	...	...	...	...	100 "
Middlings	...	...	...	...	100 "
Gluten Meal	...	...	...	...	100 "
Meat Scrap	...	...	...	...	100 "

Third month in laying-house (November):—The mash was similar to that given in October, with the addition of 50 lb. of linseed meal.

Fourth month in laying-house:—The mash had the same composition as that of the second month.

Fifth month in laying-house:—The mash had the same composition as that of the third month.

Every alternate month after this time 50 lb. of inseed meal was put into the mash, as given for

the second month. This dry mash was kept before the birds all the time in open hoppers.

The character of the egg production resulting from this method of feeding is shown below:

EGG PRODUCTION OF 300 BARRED PLYMOUTH ROCK PULLETS, AUTUMN AND WINTER OF 1909.

Month.	Total number of eggs laid.	Average per bird.
September	139	0.46
October	725	2.42
November	984	3.28
December	2,926	9.75
Totals	4,774	15.91

From this table it is evident that the average production made no sudden increase in early autumn, but rose gradually, until in December it rose quite rapidly at the time of year when a high egg average is most desired. On this system of feeding the pullets were found to be much freer from digestive troubles and diseases involving the liver, and there was no moulting in the early winter.

The dry mash used at the station for birds kept as breeders after they have moulted was as follows:

Bran	...	...	...	...	400 lb.
Maize Meal	...	...	...	...	50 "
Middlings	...	...	...	...	50 "
Meat Scrap	...	...	...	...	100 "

From about a month before the birds to be used as breeders (old hens, cockerels, and cocks) were mated up, they received richer food, and were eventually fed on the third month ration as described above for pullets. This method of feeding breeders appeared to increase fertility and the hatching quality of the eggs, and the vigour of the chicks.

Appreciation.

Dr. Raymond Pearl, the celebrated American biologist, writes: "The April ILLUSTRATED POULTRY RECORD came to hand yesterday. I must congratulate you on the excellent standard at which you are maintaining this journal. No other poultry paper that I know approaches it from the standpoint of quality."


Turkey Trains.

In an interesting article appearing in the *Reliable Poultry Journal*, it is stated that "the Thanksgiving and Christmas turkey shipments from East Tennessee totalled probably 250,000 birds, and represented roughly, half a million dollars (£100,000). There were numbers of car-load lots shipped from this territory, but the more important shipments were assembled at Morristown, Tennessee, and hurried to Baltimore, Philadelphia, and New York by special trains. The largest single shipment was a train of thirty-four cars, which went through to New York for the Thanksgiving market. A special turkey train which left Morristown, Wednesday night, December 18th, reached New York the following Saturday morning, with 30,000 birds to supply the Manhattan demand."

THE SEVEN PHASES OF THE POULTRY INDUSTRY.

BY WILFRID H. G. EWART.

V.—THE FANCY.

 O statistics being available, it is impossible to judge precisely how far the poultry fancy has advanced during a generation, but there can be no doubt that progress has been very considerable. If we take the number of shows as a guide we find a steady advance year by year culminating in a total of close on a thousand per annum at the present time. During 1910, the last season concerning which as far as I can discover definite statistics are available, 768 shows were held—a number that was probably exceeded as a matter of fact. Since then the annual crop has increased if we are to believe general indications. Not, however, that I would attach very great importance merely to the increase of shows per annum as a just measure of the growth of the Fancy. As a fact, I believe the rapid multiplication of poultry exhibitions has outstripped

THE ROOT OF THE TROUBLE.

The root of the trouble is somewhat timeworn—but timeworn because it is so important. I refer to the control of the Fancy. It might seem arbitrary—and certainly would meet with extensive opposition—to suggest that the number of open shows should be limited, nevertheless I believe this is one direction in which supervision is needed. The particular phase of the poultry industry with which we are at present dealing differs from the other six phases in the fact that it is actively competitive in a representative sense. By this is meant that success in the Fancy depends upon success in the show-pen, which state of affairs would lend itself to all kinds of abuse were there no central authority. Such an authority to be effective must control fully the three vital elements of the Fancy—the Show, the Judge, and the



A Belgian Fancier's Yard.

[Copyright.]

the capacity of the Fancy to cope with them, and this, of course, is a source of serious weakness. Supply has outstripped demand, and when that is the case somebody will be in "Queer Street." It is not surprising therefore to see in the Press passionate appeals for support from harassed secretaries or to hear of balances on the wrong side as a result of holding big shows.

Exhibitor. Failing this control, a desire to win prizes at any cost becomes paramount and—as in professional sport—fair competition gives place to technical anarchy.

NECESSARY REFORMS.

Speaking purely from a commercial point of view in regard to the industrial aspect of the poultry fancy, this control is obviously essential.

Equally it must be directed not as a sentimental lever nor as a guardian of morals but solely in the interests of poultry fanciers. Only thus can security of trade be assured together with that promise of ultimate success which acts as a magnet to the new-comer. Only thus can money be freely circulated among as many hands as possible. Cliques are dangerous, and the grave scandals which quite recently have resulted from them should never be allowed to occur again. Of shows I would say that under the ægis of a powerful central body they could be disposed to advantage. This body should license them as to-day the Jockey Club licenses race meetings or the Football Association football matches. It would not issue annually more than a certain number of licences, and the exhibitions which failed to obtain them would either have to become local affairs or go to the wall. The remainder should become rich and strong with large reserve funds, and instead of struggling on from year to year they would be in a position to offer big prizes at reduced fees. As to judges, who, after all, are the essential element in fair play, let them, too, be licensed as competent and estimable men. Exhibitors, let us recognise, require a great deal of looking after, not because they are a bad lot but because they are human beings with opportunities of mischief. Give them the impression that they can do as they please with impunity and there will be all kinds of trouble. Make them understand that there are laws which they must respect, however, and they will fall into line.

THE REQUIREMENTS OF SUCCESS.

I may have dwelt too long on the question of controlling the poultry fancy, but then it is antecedent to the very existence of a strong competitive fabric. I pass on. What is necessary to become a successful fancier to-day? 'Twould be tedious to go over the old ground of capital, experience, etc., and we may take it for granted here that a sensible person will not invest the one without the other. Neither, however, is a guarantee of ability to build up a good business. Assuming, nevertheless, that a man has at least £500 at his back and has spent not less than twelve months in poultry farming on a fair scale, let us consider the lines on which he should go to work. First there is specialism. Look at the most successful farmers of the present day and you will find that nearly if not all of them began somewhat modestly with one or two breeds and that only after they had reached the top of the tree with these did they increase the number or variety of their stock. You see, it is rather like a great city store. A shop increases with the growth of custom and as it increases adds new departments and new

wares to its original lines. So arose Harrod's, Gamage's, and Whiteley's. Concentrated study of a particular breed such as the Buff Orpington, the Barred Plymouth Rock, the Rhode Island Red, and the Black Wyandotte guarantees a man so large an advantage over the individual who dabbles in all of these. Given an equal class of stock in the first place, the mere fact that the specialist can afford to rear just four times the number of chickens with four times greater chances of finding a winner among



A famous Bantam Fancier's Pens.

them leaves him with an immense advantage. As to sales, you will find that a fancier who has a definite reputation for one particular breed of fowls acquired by winning big prizes at important shows is in a better position than his rival who, on the contrary, has acquired a reputation for mediocrity by winning lesser honours at lesser events. Mediocrity in business is fatal, and poultry fancying is essentially a business.

PUPIL-FARMING.

Of course the employment of outside labour is a formidable consideration. The amount of attention demanded by a large stock of fancy poultry, especially in the rearing season and the

winter show season, is tremendous. Much of this is caused by the modern—and very proper—system of sub-dividing into numerous lots. There are utility cockerels, fatteners, second-grade pullets, second-grade cockerels, immature chickens, stock hens, stock cocks in cockerel-boxes, show cockerels and show pullets in covered runs, and finally there is the exhibition team in pens—all distinct and separate. This gives an idea of the amount of work that confronts a big poultry-farmer in the way of

cleaning, feeding, and watering alone. Paid labour sufficient to run things properly would prove a very serious handicap at the start, and so there has arisen in conjunction mainly with fancy poultry-farming that curiously profitable business of pupil-farming. Pupil-farming, while putting a good round sum into the pockets of the proprietor, finds him also intelligent labour. He may have much to put up with as well, but on the whole it must be reckoned a very paying game.

POULTRY LICE.

BY FRED. V. THEOBALD, M.A.

Vice-Principal and Economic Zoologist of the S.E. Agricultural College.

PARASITES are organisms which live upon or within other animals or plants, feeding upon them and so causing unhealthiness or actual disease. The animal or plant upon which the parasite lives is usually called the "host." This parasitism, by rendering the host unhealthy, predisposes it to other diseases, often of a fatal nature—such as the diphtheritic roup and tuberculosis in poultry. Some forms of parasites work directly on the host by causing some specific disease, such as gapes. There is another way in which parasites work injuriously—namely, by carrying specific disease germs from animal to animal, bird to bird. This is the case with that fatal disease of fowls, in South America, and elsewhere, known as fowl fever or spirillosis, a parasitic tick being the carrier. Other parasites, by causing irritation, make their host unwilling to take nourishment, and, in the case of birds, to forsake their eggs. It is in the latter way that bird lice are so harmful to poultry.

Amongst the parasites of the fowl we find, as in man and other animals, that we can divide them into external parasites and internal parasites. The former are exemplified by lice and fleas, the latter by the gape worm and the white worms of the intestines.

Bird lice are true insects, and have a mouth formed for biting or chewing their food, whilst human and most mammalian lice have a piercing mouth for sucking blood. The bird lice, which are called *Mallophaga* subsist upon the productions of the skin, and they also devour the barbs of the feathers, especially those of the saddle hackle, and so cause unsightliness, for the feathers become jagged and notched.

Nearly every bird has its own particular species of lice—for instance, those of the duck, turkey, goose, and fowl are all quite distinct. As far as we know at present, an interchange of hosts is very unusual. Only once have I found a duck louse on a fowl, and never one of the fowl lice on ducks, even when they have been commingling when badly infested with these parasites.

The so-called *Menopons*, or wandering lice of the fowl, may, however, occur on turkeys, pigeons, and even pheasants.

Apparently fowl lice breed all the year round, but with greater energy in spring and summer. The reproduction of these annoying insects is very rapid under favourable circumstances. The conditions most favourable to them are damp, dirty, dark, and badly-ventilated houses and the unhealthy condition of the birds. It must not be assumed, however, as is too frequently done, that dirt breeds lice; it merely acts as a medium for encouraging them. It must not be assumed that unhealthy birds only are attacked by lice; perfectly sound ones may be, and then the lice cause unhealthiness.

Under favourable conditions, it has been estimated that the second generation from a single female louse may number twenty-five hundred individuals, and the third generation the enormous number of one hundred and twenty-five thousand. This monstrous progeny may be accounted for in no less than eight or nine weeks. One can thus readily understand how poultry may suddenly become affected to such an extent that they do not thrive. It is not only fowls which are attacked by these loathsome insects. Where chicks hatch out under natural conditions they nearly always become infested, unless the nesting-box and the mother have been thoroughly cleansed.

This infestation in chicks may come from either direct—the mother or from surroundings. The former is the usual way, for most of the lice live permanently on their hosts. There are, however, the lice called *Menopons*, which frequently leave the birds, and these may be found in the nests; they also invade the little chicks. We see this now and again happening even in foster-mothers which have been kept in a dirty state near poultry runs. The old birds may leave the lice behind them there, if they are allowed to enter, and so the chicks may receive them. Lice will not live many months without food derived fresh from the host.

How long they may live we do not know ; on this subject we want further careful entomological evidence. The writer once kept some for nine weeks, with only old feathers to feed upon.

The eggs of these wingless insects are laid upon the feathers of the birds, especially amongst the down feathers. They are attached to them by numerous fine threads around their base. The shell of the egg is beautifully sculptured with hexagonal markings. The incubation varies from six to ten days according to the time of year and local conditions. Young lice are very like the adults, save that they are smaller and paler in colour ; sometimes almost white. They are very unlike the young of the moth or bee, which hatch from the egg as a caterpillar or grub, and which pass through the chrysalis or pupal condition—a period of rest and change—before the adult butterfly or bee makes its appearance.

Young lice live on the host just as do the mature sexual creatures, and they feed in just the same way and cause the same intense irritation.

Growth from the young louse to the adult takes place gradually and is accompanied by a series of moults or castings of the skin.

Reproduction takes place mainly on the birds, but sometimes the crawling lice or *Menopons* may be found in copulæ in the nests, especially where straw or hay is used and the nesting-boxes are foul with excrement.

Lice are spread from fowl to fowl and run to run in various ways. A common channel of distribution amongst birds is *viâ* the nest, for many lice leave the host at night and may be found wandering about, regaining other fowls when laying during the day. Very many are also distributed during copulation. The introduction of an infested male bird is often the means of contaminating the whole flock. Another way may possibly be by means of certain two-winged flies, which are sometimes found on fowls in this country. Dr. Sharp has observed these diptera carrying parasitic lice.*

The lice found on fowls may be grouped into three divisions, namely—(i) those which live fixed on the skin of the head and neck, especially of young birds, and which also occur under the wings and around the rump ; (ii) those which wander over the whole bird, more or less active creatures which one finds running over one's hands and arms whilst handling or plucking poultry ; and thirdly (iii), those which live between the barbs of the feathers on the wings and tail.

The first-named are known under the technical names of *Goniodes* and *Goniocotes*. In these the bodies are wider than the heads, and they are sluggish in habits. The second group, the active, crawling, wandering lice, have the body large and broad, but very little wider than the head, and they are flattened in general form. The last group, known as *Lipeurus*, have very long and narrow bodies ; two kinds of these long lice occur on fowls. The wandering lice are called *Menopons*. One species,

known as *Menopon pallidum*, is also found on turkeys, pigeons, and pheasants. The *Goniocotes Eynsfordii* (Theobald) mainly attacks the head and neck of chicks and often causes serious loss. They are found buried amongst the down or feathers, with their heads pointed in tick-like manner to the skin and their bodies projecting upwards and somewhat swollen.*

Whenever one finds large numbers of lice upon poultry one may be sure that they have been kept in unsanitary surroundings, or else the birds have become debilitated and weakened from some cause or other ; and this state is usually followed by lice, which seem to breed more rapidly as the host becomes unhealthy. Damp, dark, dirty, and badly-ventilated poultry-houses and hen-roosts are places most prone to harbour these pests.

Prevention lies in seeing that the above-mentioned unsanitary conditions are done away with. Roosting-places should every now and then be thoroughly cleansed, and there is nothing better than a good spraying with fresh hot limewash for this purpose. Machines for spraying limewash can now be obtained, so that a fine spray can be sent over all parts even of a large building. Walls, roof, nests, and perches all want treating. The limewash may be further improved by adding half a pint of paraffin to every gallon of wash, churning well together with a syringe first. A good dressing must be given so that it runs into all cracks and crevices. Of course, nesting-boxes and setting-places should be paid special attention to.

There is nothing better to keep down lice than *dust baths*. Every pen of fowls should have easy access to a dusting-box. This should be kept in the dry, and road-dust will form the best material to use, but it may be much improved by the addition of some pyrethrum powder mixed with it. Fowls do not seem to mind this. Pyrethrum is also an excellent substance for dusting over the nests, as it keeps away fleas as well as lice.

For *treatment* we should first attack the lice on old birds. These may have pyrethrum dusted over them. When doing this it is best to hold the bird up by the legs with head downwards ; the powder may then be shaken, and will be found to fall well between the expanded feathers to the skin. Small puffs may be now had, which send out this or any other powder in a fine cloud of dust.

Chicks should be freed from lice at once, especially of head and neck lice. Nothing is better for this purpose than ordinary lard rubbed well over the invaded area. One part of sulphur to every ten of lard may be used for anointing old birds, but sulphur is best avoided in the case of chicks. White precipitate ointment is perhaps the most fatal substance to lice, but its use is attended with some danger when applied to young birds.

Cleanliness, plenty of light and air, and as much freedom as possible, the use of dust baths, and the occasional treatment of chicks and setting hens will soon make the inconvenience and loss caused by these parasites a thing of the past.

*Proceedings Entomological Society of London, p. xxx., 1890.

*Descriptions of all these Lice will be found in my "Parasitic Diseases of Poultry." Gurney and Jackson. 1896. (2s. 6d.)

IN PRAISE OF THE RHODE ISLAND RED.

By J. S. PARKIN.

Of the Rhode Island Red Farm, Knox, Harrogate.

NOW that the hatching season has arrived many poultry-keepers are on the look-out to improve their present stock. A word or two on the Rhode Island Red from a utility point of view may, therefore, be of interest. After many exhaustive tests I have found that no other breed is fit to compete with the Red as a layer in cold weather, when eggs fetch high prices. An American poultry farmer once said that he was certain that his Reds could read the market prices, since whenever the price of eggs rose they always laid the best. This has been my own experience, and when the weather is bad and most fowls stop laying, the Reds seem

They are the easiest chickens to rear, being a breed that possesses a good constitution. Chicks bred from sound healthy stock rarely give any trouble. A sickly chick that is always running for the sleeping chamber is quite unknown. At the time of writing I have 110 chicks running about, and they have never known any heat above seventy degrees since coming from the incubators, yet they are as healthy as anyone could wish. I have some show chickens reared in a small back-yard, five by three yards; eleven chicks and a hen were placed here. The breeds were reared to six months old and were as well in every way as those in large runs. When they were five months old I showed a pullet and secured a prize in a very strong class, competing against such breeds as winners at the Palace and Club Shows. This pullet laid its first egg before it was six months old.

The cockerels make good table birds, being ready to kill at four months old. I have seen them turn the scale at four lbs. when three months old. Those people who have an objection to their flesh being rather yellow have to admit that the flesh is quite as good in flavour and texture as Game or Dorking. They are a breed that do well on any soil; wet heavy ground suits them as well as dry, nor does it affect their growth.

I find the dark Reds are by far the best layers, and they beat the light shades, although both may have been bred from the same hen. Breeders and judges are favouring the dark red rather than the light.



A Rhode Island Red Cockerel.

He was awarded prizes the only time he has been shown.

to be at their best. Probably this is due to their having originated in an exposed country. Being a healthy breed and always on the move enables them to stand much more cold and wet than other breeds.

Many of my chickens have been put to severe tests. Last year I placed thirty in a foster mother, and at eleven days old I gave them their liberty, when there were three inches of snow on the ground. Further, they were put in an exposed place, where they felt the full force of every wind at a time when the temperature at mid-day was two degrees below zero. I never allowed the brooder chamber to be above 60°. The chicks seemed quite to enjoy it; they were out in the snow from daylight to dark, and not one of them showed any ill-effects of the test, nor was their growth in any way effected.

Rhode Island Red chickens require only a dry bed, free from draughts at night, and good wholesome food, and they will look after themselves.

Another View of the Rhode Island Red.

By MISS STANLEY-SMITH.

The Rhode Island Red, as we hope to get it soon, is as near the ideal as any fowl we have so far evolved. Its origin alone shows what a splendid fowl it is. It originated some years ago in Rhode Island, U.S.A., where the farmers selected all the red birds from their mixed stock because they found them to be the hardiest and the best layers. From a fancier's point of view there is enough difficulty now in breeding to the standard to make it a real sport, although at present breeders have not found it necessary to resort to double mating. They are trying hard to avoid this if possible, as it makes things so much more complicated.

The great difficulty in the colouring of the cocks is to get the hackles free from ticking—a brassy effect in the neck—and the undercolour free from smuts. Some noted breeders say that in the breeding-pen the richest coloured birds must have smut in the undercolour and fluff, otherwise their progeny will soon show white, which is worse than

smut. But in the show-pen no trace of smut must be permitted—the undercolour must be red or salmon to the skin. In the wings the primaries must be red on the upper web and black on the lower, whilst the secondaries must be exactly the reverse, namely, black on the upper web and red on the lower. This in perfection is at present almost impossible to get. The wing bar must be quite free from black, which is rather difficult to obtain, but by no means impossible. The tail coverts and sickles must be a rich bottle green, although it does not matter if the base of each feather shades off to red. The rest of the body should be a rich red, not quite so dark as chocolate but with no suggestion of chestnut. The colouring of the hen should be as nearly as possible the same shade as the breast of the cock. But in the neck hackle a slight black ticking is allowable—but it will not count against a bird if the hackles are plain and free from ticking. The colouring of the wings should be the same as that of the cock.

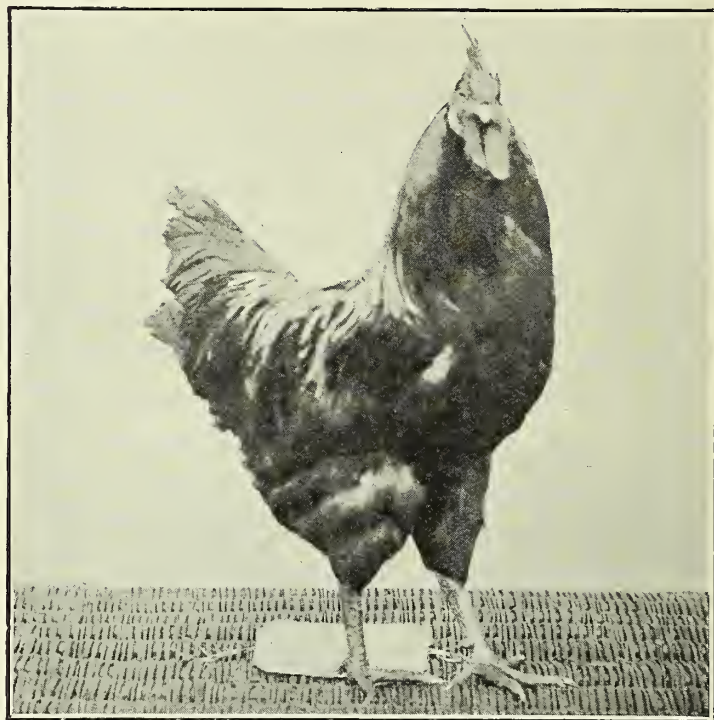
There are two varieties of the Rhode Island Red, single and rose combed. The single combed variety is the more popular of the two in spite of the fact that in the full-grown cocks there is a great tendency for the comb to grow too large, and droop over to one side. This it is thought is due to the fact that the Brown Leghorn has probably been used to cross with the Rhode Island Red to enrich its colour.

Type in this breed is extremely important. It is really not quite like that of any other breed, but more nearly resembles the Plymouth Rock than anything else. The back must be long and flat, not in any way curved like that of an Orpington, for instance. The body must be deep and wedge-shaped rather like that of a Dorking, but not so big, and the breast must be wide. The legs are of medium length, of a bright clear yellow colour with a band of red down the outer side of each. The nails and beak must be yellow. One of the great difficulties experienced by breeders is to get the face entirely red, with no white in the lobes.

For utility qualities this breed is hard to beat. The chicks are extremely hardy and when only a few days old have been known to come out of their brooder on to the snowy ground with the thermometer standing below zero, and absolutely refuse to be driven back again. They grow very rapidly and the pullets will often commence laying when only five months old. They lay a beautiful brown egg well over two ounces in weight. It has been often found that the birds with the longest bodies are the best layers. The eggs have a beautiful rich flavour.

This breed is very good for table, as it grows quickly, and is very fine boned and thin-skinned—the only drawback being that the skin is yellow. This, however, can be greatly improved by feeding the birds largely on Sussex ground oats and skim milk, which will make the skin and flesh almost white. These birds have such quiet dispositions that they are admirably suited for close confinement.

Owing to this quietness they are very easy to train for the show-pen, and even without training they may be relied on to show well without fluttering about and spoiling their chances with the judge by extreme nervousness. Another advantage is



A Rhode Island Red Cock.

A winner of many prizes. The property of the Rhode Island Red Farm, Knox, Harrogate.

that they do not need washing before a show, as their dark plumage does not show the dirt as a lighter coloured bird would. So far, the fancier has not spoiled the utility qualities of this great breed, as the good show specimen is generally the best utility one also.

Matrimonial Eggs.

The old story of how a young girl by writing her name and address on an egg made it known that she was on the out-look for a husband, has come up again. In this case her period of hope was prolonged by the egg being kept in cold storage for months. Still, so it is said, the desired end was attained ultimately.

Ancient "Fresh" Eggs.

It is reported that the legislature of Washington (U.S.A.) State has a bill before it providing that, if enacted, "strictly fresh" eggs shall not exceed thirty days old, and "fresh" not more than ninety days. Evidently the traders are pre-eminent there.

That 200-egg Hen Again.

Farm Poultry says: "The bird producing about 150 eggs appears to be able to transmit its vitality unimpaired, but the 200-egg hen does not. There have been cases where 200-egg hens produce a small proportion of off-spring which equalled their records, and where this was repeated through several generations, but I know of none where pedigrees were kept, where the heavy producing line was maintained long."

POULTRY COOKERY.

CHICKEN SALADS.

DURING the spring and summer months, and even in winter, it is quite an easy matter to obtain an unlimited variety in salads, but great care is necessary in their preparation, and a few rules must be strictly observed in order to render the dish a success. First, the vegetables must be quite young, freshly cut, and in perfect condition. Whenever possible they should be gathered early in the morning, or late in the evening, and kept in a cool place until required. Secondly, they should never be allowed to lie in water as that entirely destroys the delicious crispness which makes a salad so enjoyable, all that is necessary being to hold them under gently running water for a minute or two, when any dust or grit which may cling about them will speedily disappear. Thirdly, the various items employed in the making of the salad must be rendered as dry as possible before using, and the best way to accomplish this, is to drain them well in a colander, or a proper salad basket if one is available, then afterwards shake them to and fro in a clean soft cloth held up by the corners, when all undue moisture will be absorbed without any pressing or squeezing, a process to be most carefully avoided. Fourthly, never cut the vegetables with an ordinary steel knife, as that is very apt to spoil the delicate colour; if a silver one is not at hand the best way is to tear the items in shreds with the fingers, with as little handling as possible. Having carefully carried out these rules, it becomes a very simple matter indeed to provide a dish which will prove all that a salad should be. The following are a few examples which, we hope may be of use to our readers.

No. 1. Cut up the requisite quantity of cold cooked chicken into julienne strips, and place these in a salad bowl with some fresh cucumber, celery, boiled beetroot, the whites of two or three hard boiled eggs, some pickled gherkins, and cooked French beans, all cut up in strips like the meat, then add some fresh lettuce, endive, and watercress, torn up into small pieces, and a seasoning of salt and pepper, and mix thoroughly; pile the salad up high in the bowl, pour over the whole some rich creamy mayonnaise sauce, ornament the surface with a tasteful arrangement of bright red boiled beetroot cut in slices and stamped out with a small fancy cutter, pickled walnuts cut in quarters, French beans cut in neat lozenge shapes, slices of cucumber stamped out like the beetroot, and a good sprinkling of sifted egg yolk over the whole, and serve accompanied by a well-made salad dressing.

No. 2. Divide a plump tender chicken which has been carefully roasted for the purpose, into small neat pieces, and free these entirely from all skin, etc., then season them well with salt and pepper, and sprinkle them freely with lemon juice. Have ready a well varied green salad prepared according

to the directions already given, and place a layer of it at the bottom of the salad bowl; then arrange on this a few pieces of the chicken, and cover these with a little of the dressing which is being used; then follow with more salad, another coating of the dressing, and so on, until the bowl is sufficiently full, the last addition being a good thick coating of the salad cream; ornament tastefully according to the items available, and serve.

NOTE :—If preferred, these salads may be served on a flat dish; in which case they look very dainty piled up high in the centre, and sprinkled freely with a mixture of finely chopped parsley, and sifted egg yolks, the other items being arranged as a border round the case.

No. 3. Cut up some cold cooked chicken and lean boiled ham into small dice, and season pleasantly according to taste. Have ready some liquid jelly made from chicken or veal bones, and sufficiently strong to be quite firm when cold, and pour some of it into a plain ring mould, turning the latter about so that every part may be evenly coated. Mix the chicken and ham with a little of the jelly, and put it carefully into the mould, then set it in a cool place over night. When required turn out the moulded meat on to a flat dish covered with a fancy dish paper, and fill in the centre with a high mound of well-mixed, pleasantly-seasoned green salad, which has been thoroughly moistened with thick creamy mayonnaise sauce, or any other salad dressing which may be preferred. Ornament the surface tastefully and serve.

No. 4. Cut up the requisite quantity of cooked chicken, boiled ham, sour juicy apples, cold cooked potatoes, and stoned olives into small dice, then add some French capers, a table spoonful of finely chopped pickled gherkins, a few pickled walnuts cut in quarters, and a table spoonful of minced onion; mix the ingredients thoroughly with a little good salad dressing, and pile them up neatly in the salad bowl. Pour a little more of the dressing (which should be thick and creamy) over the top, and ornament the surface with hard boiled eggs cut in quarters, slices of boiled beetroot stamped out in small fancy shapes, and a sprinkling of roughly chopped pickled walnuts over the whole. If a whole chicken is being used for the purpose, the white meat should be cut in small neat slices, and arranged on the top of the salad before the latter has been decorated, in which case it should be pleasantly seasoned according to taste, a few hours previously.

SALAD VINEGAR. This forms a most delightful addition to any and every kind of salad. Put four ounces each of shallots, sweet savoury, and tarragon, into a mortar and bruise them well, then transfer them to a strong stone jar; add two table spoonfuls of chopped mint, and a bunch of thyme, and pour over the whole two quarts of pure malt vinegar. Keep the jar in a warm place for a fortnight, being closely covered all the time, then strain off very carefully into small bottles; cork these tightly, and store in a cool dry place.

MONTH-OLD CHICKENS AND THEIR TREATMENT.

THE most critical period in chickenhood is that from the time of hatching until they reach four weeks old. The care bestowed upon them during that period is of the utmost importance, and is a factor which may very largely determine the chicken's future value, either in the show-pen or from the utility standpoint. At the same time, the care and attention must not cease when the chickens are a month old, or the first month's work will have been in vain.

When they are hatched artificially, the heat in the brooder should be gradually lowered, so that by the time the birds are four weeks old the temperature will not be above 65 deg. No hard-and-fast rule can, however, be laid down in this direction, since there are so many influences that have to be considered, such as the time of the year, condition of the weather, position, and construction of the brooder. There are many authorities who declare loudly in favour of keeping the temperature as low as possible, the idea being that chickens so treated are brought up in such a hardy fashion that when the time arrives for them to face adverse conditions without the warmth and comfort of a brooder they are better equipped, by their early training, to bear greater severity in the weather. With this, however, I do not altogether agree, since I contend that chickens thrive best, and ultimately make better stock, by being reared in a sufficiently-heated atmosphere. Their growth is much more pronounced and their general condition better. A mistake can, however, be very easily made either by over or under-heating; but, as before stated, the temperature, when the chickens are a month old, should be 65 deg. (which, as a general rule, will be about right). Under favourable circumstances—by this I mean where space will allow of each batch being located sufficiently far apart to prevent the chickens mixing together and crowding into the same brooder at night—they may have absolute liberty and freedom to wander about and exercise their scratching propensities.

When they have been fed from the commencement on nothing but dry food, at four or five weeks old an addition to their dietary should be made, consisting of two feeds a day of soft food, which will considerably assist in the formation of feathers. This is a very important matter, and must not be neglected, since at this age their "fluff" or baby-feathers are disappearing, and plenty of nitrogenous food is needed for laying the foundation of their adult plumage. This considerably drains the system, and unless food be of the right kind a serious check to their growth is inevitable. The food, therefore, must not only be ample, but of the quality to both keep the body and feathers growing. Their digestive organs have been well exercised and strengthened by the seeds upon which they have hitherto existed, and the soft food will come as a very valuable variation and be easily assimilated,

thereby giving a rest to those organs. Most of the chicken-meals so largely advertised are practically similar in nature, and are excellent, containing, as they do, most of the elements required for assisting the growth and maintaining the health; so are coarse oatmeal made with boiled milk into a very stiff porridge, ground oats, and fine barley-meal, from which all the larger particles of husk have been sifted. Middlings are too coarse and fibrous for chickens at this age, and may cause diarrhoea. There is one matter, however, which must not be overlooked. Whatever kind of soft food is given it must never be too moist, nor yet must it be allowed to remain within easy reach of the chickens for any length of time. Make the food into as stiff a paste as possible, give very little, and at regular and frequent periods. This is advice of a very elementary nature to the majority of poultry-keepers, and on that account like most of the simple, everyday matters, frequently overlooked.

Green food, as hitherto, must be generously supplied, young grasses and other tender shoots are invaluable. As a rule chickens that are at liberty can get all they require at this time of year.

Worms and insects of various kinds can also be obtained naturally, which gives such help to the constitution. When the chickens are placed in such a position that these things have to be hand-fed, small portions of butchers' offal or table-scraps will prove excellent substitutes.

Whether chickens are naturally or artificially reared it is absolutely necessary that the brooders and coops should be regularly moved from place to place thus minimising the danger of disease arising from impure soil, which is such a fruitful source of trouble. Cleanliness is of the greatest importance, and unless care is taken in this direction all else will be in vain. This applies equally to the management of coops, brooders, and chicken-houses. The first should be made with a movable wooden floor, and requires daily attention as to scraping for the removal of all excrement.

Brooders are rather more difficult to keep thoroughly clean, as the sleeping compartment is so small, and is shut in to such an extent that to get into all the four corners is not easy of accomplishment, especially for those whose time is limited. It must, however, be done, as chickens will not thrive in dirty, insanitary surroundings. How often one notices fine, healthy-looking chickens beginning to droop as the vigilance of the owner slackens. The chickens' feet and toe-nails get caked with mud, which, unless removed, becomes as hard as stone. This will stop the free circulation of the blood, the legs grow cold, and trouble very soon follows. This is directly caused by inattention to cleanliness, and there is no excuse for attempting to rear chickens under such unsavoury conditions. If time will not allow or inclination suggest what is needed to be done, it would be much better to give up the work entirely.

Probably of more importance than almost anything else is the question of ventilation and the

proper amount of space to be allowed in the sleeping quarters. This, however, is not an easy problem to settle, since the forms of sleeping accommodation for chickens are so varied in their description. So far as brooders are concerned, as soon as possible after the chickens are a month old they should be removed to more roomy quarters. Despite all that may be said to the contrary, the present type of brooder is distinctly too small for chickens after

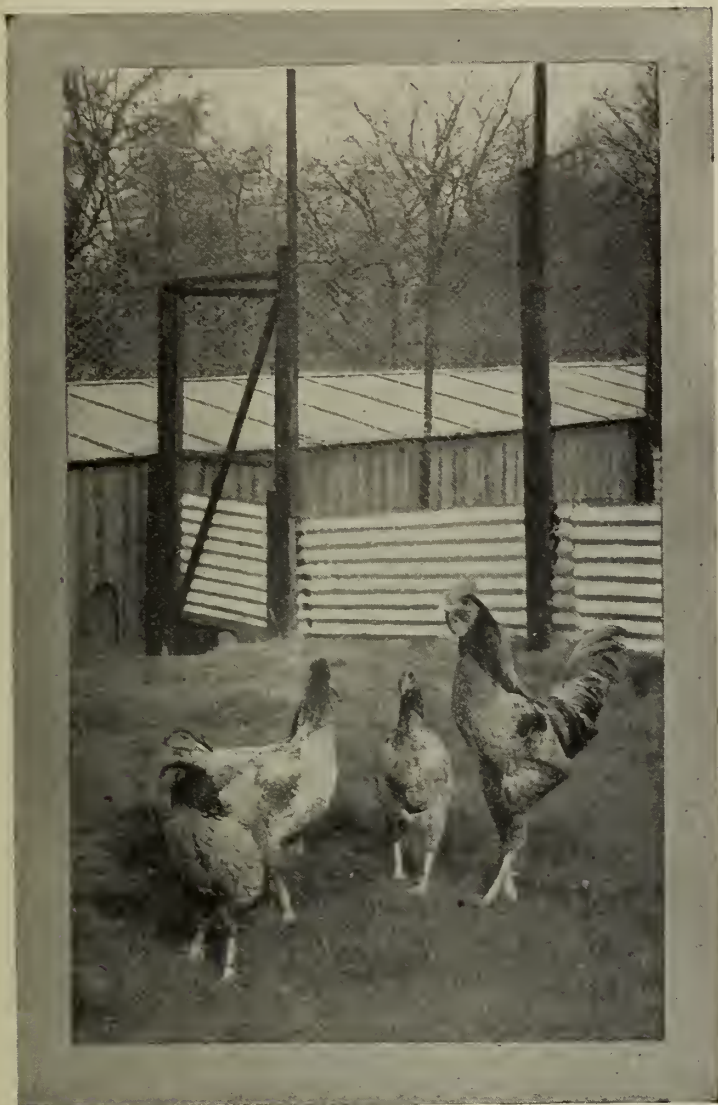
too severe for them to remain in the coops alone. They may be placed in chicken-houses similar to those mentioned for artificially-reared chickens when they are removed from the brooder. Overcrowding must, at any cost, be avoided. What may be ample space for them to-day is quite insufficient ten days hence. Young birds must have their space systematically increased commensurate with their growth. Rigid culling should be carried on right from the time that their appearance, shape, colour, and other characters are sufficiently pronounced to indicate into what they will develop. The doing of this will serve a dual purpose in that it combats the tendency to overcrowd, and at the same time gets rid of the wasters, so that the land is occupied by more perfect types of the respective breeds.

The advantage of a portable chicken-house is that the inmates enjoy more change than when the house is permanently fixed. There is no doubt that one of the greatest factors to be regarded in the rearing of chickens is a change of environment. This is apparent in many directions, as all who have tried the matter can testify; it increases their activity and encourages growth, and this tends to their general well-being.

POULTRY DEVELOPMENTS IN COUNTY DOWN.

Mr. Percy A. Francis, inspector of the Department of Agriculture, referring to County Down says:

On the whole, the stock birds were of fairly good quality, though there was room for further improvement. The benefits to be derived from this scheme depended to a large extent upon the quality, from the utility point of view, of the station stock, and consequently no effort should be spared to maintain as high a standard as possible for the premium birds. The housing provided for the station stock was not, as stated, in his 1911-12 report, of so high a standard, in many instances, as was desirable in a county such as Down. Good portable houses were not generally used, and only a comparatively small number of station-keepers had so far provided suitable day shelters, while there was a tendency in some cases to keep the birds in stale enclosed runs. The house, day shelter and run provided for station birds should be such as to form a valuable object-lesson to adjacent districts, and indicate a general much-needed improvement in poultry management in the county. The Committee should adopt for 1913-14 the Department's scheme for small grants to station-keepers for new portable houses and day-shelters. This had been found very effectual in other counties. New stations for 1913-14 should be established in Rostrevor, Hilltown, Ardglass, Fofanny, and Guiness. If classes or lectures were held in these districts during the coming autumn, little difficulty would be found in obtaining suitable station-keepers. The demand for eggs from existing stations was generally very satisfactory, indicating an increasing appreciation of the benefits of the scheme, whilst the demand for further courses of instruction indicated a spirit amongst the Down farmers which augured well for the future development of the industry in the county.



A well-arranged poultry pen on Major Barnes' Farm near Ipswich. [Copyright.]

this age, and, furthermore, is quite incapable of giving adequate room for more than one-fourth the number it is assumed to accommodate. A well-made, draught-proof chicken-house, with a storm-lantern placed inside to give a little heat, or a permanent building adjoining a cow-byre, from which a certain amount of heat is secured, is excellent for the purpose. Chickens that are reared in a coop, when it is not too early in the year, or when the weather conditions are not exceptionally bad, require no further accommodation until they are old enough to be removed to an ordinary poultry-house. When, however, the chickens are hatched very early, the hen will desert them, while the weather is still

POULTRY AND BEES.

By W. HERROD, F.E.S.



AMONGST the many rural pursuits which can be combined there is probably no two that will go better together than the two named above. They have much in common, even to the disposal of the produce. Dairy shops are usually one of the best means for the disposal of eggs and honey at the most-remunerative prices, as they reach the best class of customer.

The two work together also inasmuch as the work follows on and there is no slack season, which as a rule also means a lack of income during the resting period. The bulk of the work amongst poultry is usually over by May, at which time the work amongst the bees commences. This again is over by October when work amongst the birds commences again in earnest.

The outlay for a commencement is not great, and when the stock is once established no further cost is incurred in replacing it. With proper knowledge increase can be obtained quite easily from those established in the first instance.

Then again, it is not necessary to devote a large amount of ground to the bees, sufficient ground upon which to stand the required number of hives is all that is necessary. There is no fear of tainted ground, or yet the necessity for growing crops suitable for the bees. Being winged insects they go out to gather their own food from the flowers which bloom, the greater portion being obtained from fruit bloom, white clover, sainfoin, mustard, and in Scotland and the north of England from the heather. They will forage a radius of four miles. At the same time the hives should not stand too close together, at least six feet all ways should separate them. It must be remembered that it is not wise to stand the hives in the poultry runs. That this is done by some I am quite aware, but there is a certain amount of risk. The only place it can be done with safety is in the duck run.

Let there be no mistake about the work connected with bee-keeping. A great many people imagine that there is very little work in connection with bees, but that they can be left to take care of themselves, with the exception of hiving swarms, putting on and the removal of supers when filled with honey. This is a mistake, for just as poultry will give a certain amount of profit and increase if allowed to run wild, yet with proper attention and care the return is considerably increased. So it is with bees. Labour and care expended in the right direction have their reward.

The best time to commence is as early as possible in the spring, with a swarm and a new hive. It is the cheapest and best plan to have a swarm instead of an established stock. The former will not cost more than fifteen shillings, while the latter may cost as much as fifty shillings. It is

true that with a swarm the return the first year is doubtful, while with the latter it may be anywhere up to one hundred pounds of honey, yet to the beginner the advantages of commencing with a swarm are many. He is able to see the work of the bees right from the commencement. He knows the age of the combs, and can obtain these perfectly straight, instead of being irregular, which is sometimes the case if they are purchased from a careless person. He is practically certain to get healthy bees, whereas with a stock he may buy disease. He can also fairly well gauge the age of the queen.



Hiving a Swarm of Bees.

It is not a wise plan to buy stocks of bees in the autumn because they are cheap, for there is the risk of their not wintering successfully to be taken into account.

The hive chosen should be a good one, simple and without complications, which are a nuisance. A better plan is to construct one's own hives; it is a mistake to purchase second-hand hives, as very often disease lurks in them, which will cause endless trouble and expense to the bee-keeper. All the hives should be of one pattern, and the parts interchangeable for comfort in working. Un-

TABLE OF PRICES REALISED FOR HOME, COLONIAL, AND FOREIGN POULTRY, GAME, AND EGGS FOR THE FOUR WEEKS ENDING MAY 17, 1913.

ENGLISH POULTRY—LONDON MARKETS.

DESCRIPTION.	1st Week.		2nd Week.		3rd Week.		4th Week.	
	Each.		Each.		Each.		Each.	
Surrey Chickens ...	4/0 to 5/0	4/0 to 4/6	4/0 to 4/6	3/6 to 4/6	3/6 to 4/6	3/6 to 4/6	3/6 to 4/6	3/6 to 4/6
Sussex "	4/0 " 5/0	4/0 " 4/6	4/0 " 4/6	3/6 " 4/6	3/6 " 4/6	3/6 " 4/6	3/6 " 4/6	3/6 " 4/6
Boston "	2/9 " 4/0	2/9 " 4/0	2/9 " 4/0	2/9 " 4/0	2/9 " 4/0	2/9 " 4/0	2/9 " 4/0	2/9 " 4/0
Essex "	3/0 " 4/0	3/0 " 4/0	3/0 " 4/0	3/0 " 4/0	3/0 " 4/0	3/0 " 4/0	3/0 " 4/0	3/0 " 4/0
Capons	5/6 " 6/6	5/6 " 6/6	5/6 " 6/6	5/6 " 6/6	5/6 " 6/6	5/6 " 6/6	5/6 " 6/6	5/6 " 6/6
Irish Chickens	2/6 " 4/0	2/6 " 4/0	2/6 " 4/0	2/6 " 4/0	2/6 " 4/0	2/6 " 4/0	2/6 " 4/0	2/6 " 4/0
Live Hens	2/3 " 2/9	2/3 " 3/0	2/3 " 3/0	2/3 " 3/0	2/3 " 3/0	2/3 " 3/0	2/3 " 3/0	2/3 " 3/0
Aylesbury Ducklings	3/0 " 4/0	3/6 " 4/6	3/6 " 4/6	3/6 " 4/6	3/6 " 4/6	3/6 " 4/6	3/6 " 4/6	3/6 " 4/6
Ducks	—	—	—	—	—	—	—	—
Geese	—	—	—	—	—	—	—	—
Turkeys, English,,	—	—	—	—	—	—	—	—
Guinea Fowls	3/0 " 3/9	3/0 " 3/6	3/0 " 3/6	3/0 " 3/6	3/0 " 3/6	3/0 " 3/6	3/0 " 3/6	3/0 " 3/6

ENGLISH GAME—LONDON MARKETS.

DESCRIPTION.	Each.		Each.		Each.		Each.	
	Each.		Each.		Each.		Each.	
Grouse	—	—	—	—	—	—	—	—
Partridges	—	—	—	—	—	—	—	—
Pheasants	2/9 " 3/0	2/9 " 3/0	2/9 " 3/0	2/9 " 3/0	2/9 " 3/0	2/9 " 3/0	2/9 " 3/0	2/9 " 3/0
Black Game	2/6	2/6	2/6	2/6	2/6	2/6	2/6	2/6
Hares	—	—	—	—	—	—	—	—
Rabbits, Tame	1/3 " 2/6	1/3 " 2/6	1/3 " 2/6	1/3 " 2/6	1/3 " 2/6	1/3 " 2/6	1/3 " 2/6	1/3 " 2/6
" Wild	—	—	—	—	—	—	—	—
Pigeons, Tame	—	—	—	—	—	—	—	—
" Wild	—	—	—	—	—	—	—	—
Wild Duck	—	—	—	—	—	—	—	—
Ptarmigan	1/0 " 1/1	1/2 " 1/2	1/2 " 1/2	1/2 " 1/2	1/2 " 1/2	1/2 " 1/2	1/2 " 1/2	1/2 " 1/2
Sand Grouse	1/9 " 1/10	1/9 " 1/10	1/9 " 1/10	1/9 " 1/10	1/9 " 1/10	1/9 " 1/10	1/9 " 1/10	1/9 " 1/10
Hazel Hens	1/0 " 1/1	1/0 " 1/1	1/0 " 1/1	1/0 " 1/1	1/0 " 1/1	1/0 " 1/1	1/0 " 1/1	1/0 " 1/1

ENGLISH EGGS (Guaranteed New-Laid).

MARKETS.	Per 120.		Per 120.		Per 120.		Per 120.	
	Eggs per dozen.		Eggs per dozen.		Eggs per dozen.		Eggs per dozen.	
LONDON	8/0 to 9/0	8/6 to 9/6	8/6 to 9/6	8/6 to 9/6	8/6 to 9/6	8/6 to 9/6	8/6 to 9/6	8/6 to 9/6
Provinces	—	—	—	—	—	—	—	—
CARLISLE	1/11	9 1/2 /10	9 1/2 /10	9 1/2 /10	9 1/2 /10	9 1/2 /10	9 1/2 /10	9 1/2 /10
BRISTOL	—	—	—	—	—	—	—	—

FOREIGN POULTRY—LONDON MARKETS.

COUNTRIES OF ORIGIN.	PRICES REALIZED DURING THE MONTH.			
	CHICKENS. Each.	DUCKS. Each.	DUCKINGS. Each.	GEES. Per lb.
Russia	1/11 to 1/1	—	—	—
Belgium	—	—	—	—
France	—	—	—	—
United States of America	10 3/4 d.	—	—	—
Austria	—	—	—	—
Canada	—	—	—	—
Australia	—	—	—	—

IMPORTS OF DEAD POULTRY & GAME. MONTH ENDING APRIL 30TH, 1913.

COUNTRIES OF ORIGIN.	DECLARED VALUES.	
	Poultry.	Game.
Russia	£1,362	£6,647
France	£63	£2,484
Austria-Hungary	—	£10
United States of America	—	£25,731
Other Countries	£1,471	£6,446
Totals	£2,896	£41,315

IRISH EGGS.

DESCRIPTION.	1st Week.	2nd Week.	3rd Week.	4th Week.
	Per 120.	Per 120.	Per 120.	Per 120.
Irish Eggs	8/3 to 9/6	8/0 to 9/0	8/0 to 9/0	8/0 to 9/0

FOREIGN EGGS.

DESCRIPTION.	1st Week.	2nd Week.	3rd Week.	4th Week.
	Per 120.	Per 120.	Per 120.	Per 120.
French ..	8/3 to 9/6	8/0 to 9/3	8/0 to 9/3	8/0 to 9/3
Danish ..	8/3 " 9/6	8/0 " 9/3	8/0 " 9/3	8/0 " 9/3
Italian ..	8/3 " 9/3	8/0 " 9/0	8/0 " 9/0	8/0 " 9/0
Austrian ..	6/6 " 7/9	5/9 " 7/6	5/9 " 7/6	5/9 " 7/6
Russian ..	6/3 " 7/0	5/9 " 6/9	5/9 " 7/0	5/9 " 7/3

IMPORTS OF EGGS. MONTH ENDING APRIL 30, 1913.

COUNTRIES OF ORIGIN.	DECLARED VALUES.	
	Quantities in Gt. Hund.	Declared Values.
Russia	755,314	£266,653
Denmark	339,244	£159,874
Germany	65,862	£24,289
Netherlands ..	160,597	£75,305
France	120,624	£52,836
Italy	80,904	£35,671
Aust.-Hungary	160,780	£60,009
Other countries	143,828	£48,725
Totals	1,827,153	£723,362

doubtedly the best form of hive to use is that designed by the late W. Broughton Carr, and named after him the W.B.C. hive. This can easily be made by anyone capable of using carpenters' tools, even in an amateur way. The great advantage of this hive is that it is double walled, giving a more even temperature in the brood chamber winter and summer.

The hive consists of a stand with four splayed legs, floor-board, brood chamber containing ten frames, outercase, lifts, supers and roof. The frames in the brood chamber are made to a standard and have a 17in. top bar, 14in. along the bottom and 8½in. deep. To obtain perfectly straight combs, these frames are fitted with full sheets of worker base foundation, which is made from pure bees wax and impressed with the base of the cells by machinery. To strengthen the combs, wire is stretched across these frames and then embedded into the foundation by means of a heated serrated wheel. Not only are straight combs obtained, but by giving this wax the bees are saved the exhausting work of wax secretion, and the food eaten is also reduced. Each frame has upon the ends of the top bar a metal end 1½in. in width. When placed in the hive this gives the proper spacing for comb



Removing the Supers.

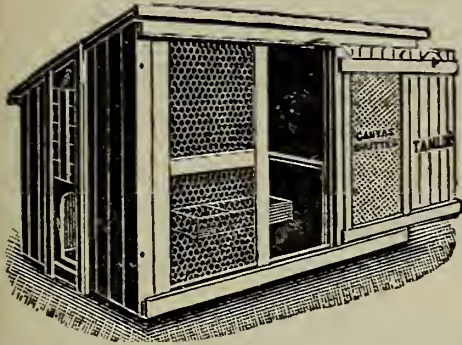
building. Over these frames is placed a piece of ticking, or calico, and a couple of pieces of some warm material, such as felt. A hole 2in. square in the calico quilt enables feeding by means of sugar syrup in a bottle to be carried out.

Having prepared the hive it is placed in position facing south-east. It should stand perfectly level from side to side and slope to the front about ½in. so that moisture will drain out. A bottle of syrup placed over the feed hole will enable the swarm to

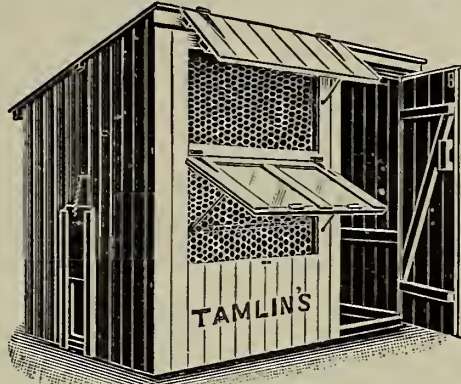
go on working when hived. When the swarm arrives keep it in a cool place until about six o'clock in the evening. First raise the entrance to the hive about an inch by means of wedges, place a fairly long board sloping from the alighting board to the ground, over this throw a sheet to make a level surface for the bees to travel up. Take the box or skep containing the swarm, turn it wrong side up and by sharp raps dislodge the bees, then with a quick downward jerk shake them out on to the cloth in front of the hive, about a foot away from the entrance. Their natural inclination being to travel up hill they commence to run into the hive. If they do not start readily take a few bees in a large spoon or cup and place them close to the entrance. They will quickly enter and tell the others they have found a home, when they will all commence to run in. Feeding should be continued for about a week. If the bees do not cover all the frames, the division board should be used to confine them and conserve the heat.

If properly managed the bees should not be allowed to swarm, but surplus honey obtained instead. This is accomplished by extra chambers, called supers, which consist of two kinds, section racks and shallow frame supers. The former are for obtaining comb honey and the latter liquid honey, which is placed in glass jars for selling. As swarming is the result of overcrowding, the giving of room to the bees in advance of requirements will prevent this. At the end of May or the beginning of June, when it is seen that the bees are getting crowded, the quilts are removed and an excluder zinc laid over the top of the frames. This is a sheet of zinc perforated with holes to such a nicety that the worker can pass through but the queen cannot. In this way brood rearing is confined to the bottom ten combs. The section rack contains twenty-one sections fitted with foundation, which when full holds one pound each, is put over the excluder and the quilt on the top of the sections. The bees finding they have more room, go up, build out the combs and fill them with honey, instead of swarming. When the first super is about two-thirds full of honey it is raised up and a second one placed underneath. In this way from sixty to one hundred pounds of honey may be harvested. If the stock is allowed to swarm no surplus honey will be obtained. If it is desired to obtain liquid honey, then a box containing shallow frames is used as a super. The honey is taken from these by means of an extractor, which takes the honey out by centrifugal force. These, when emptied, are returned to the bees, they repair what little damage has been done, and again fill them with honey. These combs are kept year after year so that the secretion of wax for comb building is saved to the bees and larger returns is the result.

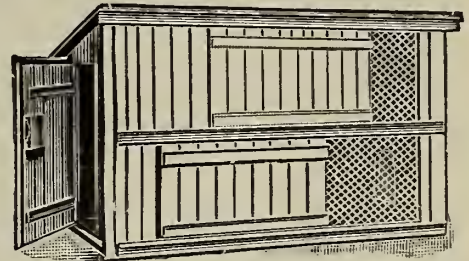
Removing Supers. This is now a simple process owing to the invention of the Porter Bee Escape, which is a tiny tin arrangement with a V-shaped spring trap. The escape is fitted into a board the same size is the top of the brood chamber. When

"WONDER" POULTRY HOUSE.

Made in one size only, 5ft. 6in. long, 3ft. 6in. wide, 3ft. 6in. high. Price 17/6, carriage paid to any goods station in England and Wales.

"CRANFORD" POULTRY HOUSE.

No. 1—6ft. long, 4ft wide, 5ft high, 33/6 } carr.
No. 2—8ft. long, 5ft. wide, 5ft. high, 49/- } paid

"SUNBURY" POULTRY HOUSE.

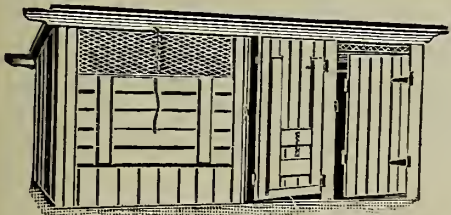
Size, 6ft. long, 4ft. wide, 3ft. 7in. high. Made in sections to bolt together. Fitted with Nest Boxes, Perches, Attendant Door with Lock & Key, Two Sliding Shutters to the Front, the top one covered with canvas. Price, complete, carr. paid, 22/6. With movable floor 5/- extra. The "Sunbury" House and Shelter combined, 12ft. long, price, carr. paid, 39/-.

WIRE NETTING.

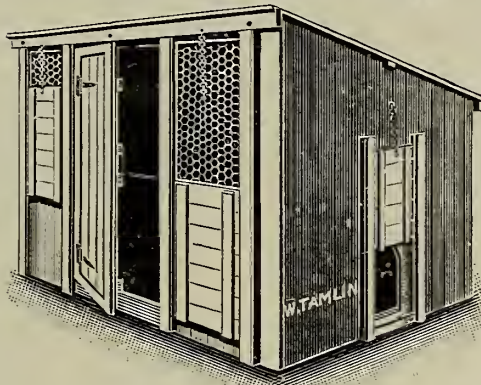
Galvanised three-ply twisted joints wire netting, from 2/5 per roll of 50 yards long. Cheapest in the World.

**COMPRESSED SHEET ROOFING FELT.**

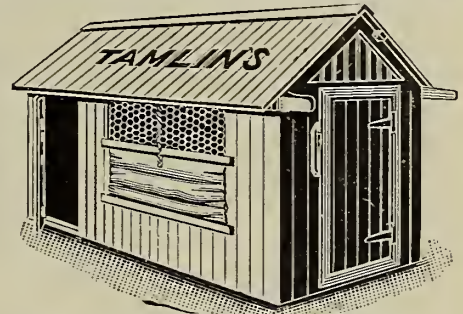
Not the common everyday article offered by everybody, but an — Asphalt — Requires no tarring, lasts for years. In rolls 15 yards long, 1 yard wide, 3/3 per roll. Cheaper in quantities.

"JACK OF ALL WORK" POULTRY HOUSE & COOL BROODER.

7ft. long, 3ft. wide, 3ft. 4in. high. A Cool Brooder, Cockerel Pen, Bantam House or Colony House. A useful appliance, as its name implies. Price complete, carriage paid, £1 6s. 6d., or £15 6s. 0d. per dozen. Can be fitted with brooder lamp, making Semi-cool Brooder, 3/6 extra.

"FELTHAM" POULTRY HOUSE.

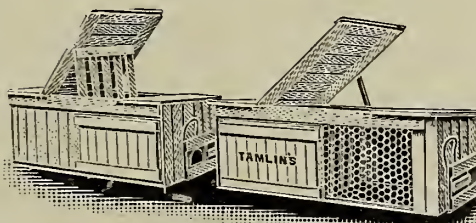
6ft long, 4ft. wide, 4ft. high. Price, carr. paid to any goods station in England & Wales, 21/-.

"WHITTON" Poultry House & Cool Brooder.

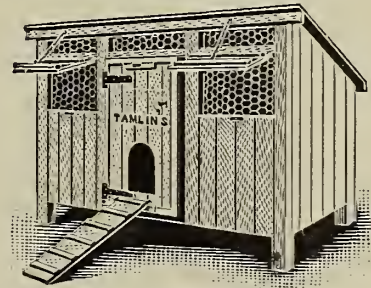
8ft. long, 3ft. 9in wide, 3ft. 9in. high. The most unique pen ever manufactured; with its canvas blind, keeps out sun-rays. Makes an ideal Cockerel Pen, Cool Brooder, Bantam House, or Semi-cool Brooder. Price, carr. paid, £1 9s. 6d. Can be fitted with Brooder lamp; makes a Semi-cool Brooder, 3/6 extra.

"CHISWICK" POULTRY HOUSE.

Fitted with dropping board. Size, 6ft. long, 4ft. wide, 3ft. 6in. high, carriage paid. 22/6.

"RICHMOND" HEN COOP AND RUN.

Size 4ft. long, 2ft. wide. Price 8/- each; 46/- for six; 90/- per dozen. Ordinary Hen Coop with Shutter, 3/9; half-dozen, 22/-.

"MOORMEAD" DUCK HOUSE.

Size, 6ft. long, 4ft. high, 3ft. 6in. wide. Price, 25/6, carriage paid.

Write for our beautiful Art Catalogue of 144 pages, with over 250 illustrations of different appliances for Poultry-Breeders and Keepers. No matter what your wants might be, you will find it in this book: Poultry Houses, Chicken Rearing, Bone Cutters, Coops, Poultry Foods, Cramming Machines, Marking Rings, &c. It's mailed to you by return free & post free.

W. TAMLIN,

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The Largest Incubator and Poultry Appliance Manufacturer in the World.

the super combs are full of honey and it is sealed over, the board is slipped under the super to be removed, at night. The bees pass down through the springs and as they cannot return the super is cleared of bees by the morning, and can then be taken off.

Subduing and Handling Bees. Many people would keep bees did they not possess a sting. This is a weapon of defence and not of offence. If bees are properly subdued and handled, very few stings will be received. When bees are full of food they are as a rule good tempered, and not likely to sting. When frightened they usually fill themselves with food to prepare for contingencies. The method of subduing is to frighten the bees by means of smoke, or the smell of carbolic acid. In the former case a smoker, which is a small tin cylinder having a removable conical nozzle, with an open end, fixed to a pair of bellows with a connection between bellows and cylinder at the back. The fuel used is corrugated or ordinary thick brown paper rolled into a cartridge and left open at each end. This is lighted and placed in the barrel of the smoker with the lighted end downwards. The nozzle is then replaced, and by working the bellows a volume of smoke is emitted from the open nozzle. This is driven into the hive in a small quantity, with the result that the bees are frightened and gorge on the food as explained.

If preferred a cloth saturated with a weak solution of carbolic acid may be used. This laid over the tops of the frames after the removal of the quilts has the same effect. If the bees are then dealt with firmly but gently, stinging will be reduced to a minimum. The bee-keeper should always protect the head and face by means of a veil. This gives him confidence and prevents disfigurement of the face, for a time, which will be the case if stings are received through neglecting this precaution.

Upon commencing to examine a stock a puff or two of smoke should be driven in at the entrance. Allow an interval of about a minute to give the bees time to fill themselves, before commencing operations. The combs should be removed gently, and handled in such a manner that they are kept edgewise. If turned down flat on a warm day the comb may fall out of the frame. Avoid all jarring, and never stand in front of the hive.

Wintering. At the end of the season the supers are removed, if the brood combs do not contain at least thirty pounds of stores the bees must be fed by means of a rapid feeder with thick sugar syrup until this quantity is stored. The amount can be judged by the filling of the combs. If eight of the combs are full and sealed, this will be enough. Finally, winter passages should be made by placing a couple of strips of wood, half an inch thick, at right angles to the combs under the calico quilt. A cake of candy put in position and all well wrapped down with coverings completes the internal work. The roof should be secured by means of a stake driven in at one side, to which a cord is

attached, tie this, and then pass over the roof, with a brick tied at the other end to swing just clear of the ground.

Profits. Properly managed and given a good district, the average profit of a hive should be twenty shillings per year

UTILITY POULTRY CLUB.

Twelve Months' Competition, 1912-13.

The Report from the Harper Adams Agricultural College up to the end of the seventh month is now to hand, and shows little if any variation in the placing to the foremost pens.

Mr. F. W. Rhodes, the Manager of the Competition, attributes the slight decrease in the total of eggs laid for the month—10,684 as against 11,292 laid the previous month—to broodiness. This is not surprising considering the preponderance of pens of sitting breeds over non-sitting breeds.

It is unfortunate that one bird out of the leading pen of Buff Rocks has died at this stage of the competition, for the pen have done consistently well. They still retain their lead with a total of 676 eggs (value £3 17s. 2½d.) laid during the competition. They are closely followed by a pen of White Wyandottes, with a total score of 671 eggs (value £3 15s. 11d.), the third place being also taken with a pen of White Wyandottes with a total score of 666 eggs (value £3 8s. 7½d.).

The pen making the highest score for the month is No. 62, Silver Laced Wyandottes, with a record of 163 eggs, an average of 27½ eggs per bird during the 28 days. This pen also held the highest score last month, and one of the birds has laid 56 eggs in the same number of days. Owing to a bad start, however, they only hold the 81st place in the competition.

The weather appears to have been wet, though warmer, and this has helped the grass runs, which in some cases were badly worn, to recover.

A gratifying feature is the elimination of the second grade egg, very few being laid during the month.

Appended is the score of the first few pens:—

Order.	No. of Pen.	Breed.	Total eggs for seven months.	Total value. £ s. d.
1	86	Buff Rocks	676	3 17 2½
2	60	White Wyandottes	671	3 15 11¼
3	32	White Wyandottes	666	3 8 7¼
4	45	White Wyandottes	638	3 5 9¼
5	24	Black Leghorns	608	3 3 11½
6	40	White Wyandottes	604	3 3 0¼
7	35	White Wyandottes	623	3 2 8¾
8	80	Buff Orpingtons	602	3 2 7¼

Issued from the Publishing Office of the Utility Poultry Club, 68b Lincoln's Inn Fields, London, E.C.

The New Laid Egg.

The bacteriologist tells us that in an egg, evaporation and the action of bacteria are evident by the third or fourth day; and there are some of us (says Mr. J. W. G. Hanford in *Farm Poultry*) who believe that from that time on the egg is not perfectly "fresh," nor "new laid," nor any other name that should mean the best. It is edible for some time after that if kept properly, but it is not of first quality, and all the statements to that effect cannot make it so. If the farmer has to have a longer time than three days to get his eggs to the consumer he should have to classify them other than the highest and he cannot expect to compete with the poultryman who delivers his product under seventy-two hours old. The hen gives us new-laid eggs every day, or every two days, and can we not at least keep up the standard she sets? Suppose the dairyman should guarantee his milk to be fresh for several days, would that make it so?

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WON'T GO IN FOR THE BUSINESS.

To the Editor of THE ILLUSTRATED POULTRY RECORD.

Sir,—Referring to your editorial in the March issue of the "Illustrated Poultry Record," in which you said: "In spite of all the talk about more intensive poultry keeping and all the Board of Agricultural experiments, the major food supply of a country depends upon ordinary farmers native or foreign" The shortage of supply of table chickens and the consequent high prices which have prevailed during the present season, more especially for home birds are not due so much to the lack of what are called poultry farms, as to the neglect of this branch of life on the part of the general agriculturalist. In this respect there is much yet to be done, and you venture to hope "that the work of the Table Poultry Club will be mainly in bringing influence to bear upon this section of the community rather than looking through specialist spectacles and promoting the interests of stock-breeders and of exhibitors."

You quoted from a writer in "Country Life" who said: "The consuming public will never get good and ample supplies of home-grown produce, till the larger farmer takes the matter in hand in real earnest." You also quoted the remarks of a prominent market salesman who said that the shortage of English poultry was simply due to the fact that "our people won't go in for the business."

There are several systems now being operated of rearing chicken for table purposes on intensive lines. As the chickens hatch out they are placed in Foster-Mothers 3ft. wide, 3ft. high, and 9ft. long; here they are kept for 6 or 7 weeks, then transferred to brooder houses, 60ft. wide and 33ft. high, down the centre of which is an alley-way, 3ft. wide, with 10 divisions on each side 6ft. wide—so there are 20 divisions containing 50 chickens each. This sized house will hold 1,000 chickens, where they remain up to thirteen weeks old, when they should be ready for killing.

Twelve of these houses can be kept going on an acre of ground, and these can be filled four times in a year; about 40,000 chickens could be reared in twelve months. This could only be effected by a well-organised system of co-operation in four separate branches, viz., Egg production, Incubation, Rearing, and Marketing; a community of small-holders could realize a considerable amount of money, only limited by the sphere of operations.

EGG PRODUCTION.

It has been clearly proved that it only costs $\frac{1}{2}$ d. per egg for food for a hen laying on an average three eggs a week which should be worth $1\frac{1}{2}$ d. each. This leaves a good margin for profit.

INCUBATION.

The cost of hatching out chickens depends upon the size and quality of the incubator. To convert an egg that has cost $1\frac{1}{2}$ d. to a day-old chicken worth 4d. to 6d. should not cost more than 1d. to $1\frac{1}{2}$ d. for gas or oil and labour.

REARING.

The cost of food for rearing a chicken from the shell until it is thirteen weeks old averages from 8d. to 9d. when reared in confinement, and 6d. if it has an outside run. To this must be added cost of litter, labour, rent, interest, etc., killing and plucking, which 6d. would amply cover, with a total of $1\frac{1}{6}$ for egg-hatching and rearing up to 12 weeks old.

KILLING AND MARKETING

might form a separate branch.

Thus the total cost say Egg 3d., this allows for 50% to be reared for maturity; Incubation, Rearing and Marketing, $1\frac{1}{3}$; total $1\frac{1}{6}$.

The average price for 3lbs. chickens throughout the year, 2/- to 2/6, would leave 6d. to 1/- per bird; putting it at 6d., if 40,000 reared, would showed a profit of £1,000.

Yours, etc.,

J. GODWIN EDWARDS.

May 20, 1913.

THE LEGHORN, PLYMOUTH ROCK, AND ANDALUSIAN CLUB.

ELECTION OF CLUB JUDGES, 1913.

92 voting papers sent out, 54 returned, of which one was unsigned. Result:

LEGHORNS.

	Votes.
Mr. T. Lambert...	10 (elected)
Mr. J. W. Morton ..	9
Mr. R. Kirk ...	7
Mr. J. Hurst ...	6
Mr. G. T. Drake ...	6
Rev. T. W. Sturges ...	5
Mr. F. Tootill ...	5
Mr. J. A. Cheetham ...	3
Mr. A. Widd ...	1

PLYMOUTH ROCKS.

Mr. F. Neave ...	8 (elected)
Mr. J. Bateman ...	7
Mr. R. Stainthorpe ...	7
Mr. R. Garlick ...	6
Mr. T. Lambert...	5
Mr. J. Taylor ...	5
Mr. W. Slater ...	4
Mr. J. Wilkinson ...	4
Mr. J. Brandon Smith...	2
Mr. H. Abbot ...	1
Mr. J. Sandercock ...	1

ANDALUSIANS.

Mr. T. Lambert ..	14	} tie
Mr. H. Platt ...	14	
Mr. H. Abbot ...	8	
Mr. F. Porter ...	5	
Mr. A. Titterington ...	5	
Mr. J. H. Wardleworth ...	5	

T. THRELFORD, *Scrutineer*.

We have pleasure in announcing another "Personal Letter by an Old Fancier," addressed to the Chairman of the County Education Committee, which we hope to publish in our July issue.

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whilst
CHICKEN REARING.

The Phosphatic Food Adjunct.
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WRITE FOR PARTICULARS.

WALLIS MEMORIAL.

SIR,

The Council have decided to invest the money received for the "Wallis Memorial," and with the interest each year to purchase two Specials to be won outright. The Specials will be, one open and one novice, and it is proposed to offer them in turn to various breeds or groups so as to make the competition as keen as possible and at the same time ensure them being distributed. It only now remains for intending subscribers to send their donations at once and if your readers will kindly bring this letter to the notice of their friends it should result in a good sum being raised. The Council will see that a Trophy is also provided similar to the "Marx Trophy."

Yours faithfully,

T. THRELFORD,

Hon. Sec. and Treasurer.

2, St. Luke's Square,
Victoria Docks, London, E.

2ND LIST OF DONATIONS.

	£	s.	d.
1st List	27	8	0
"Feathered World"	1	1	0
W. Rice	1	1	0
Anonymous		2	0
F. G. Faircliffe		2	6
A. G. Pitts		2	6
John Taylor		5	0
Mrs. A. M. Alexander		10	6
R. Fletcher Housman		10	6
W. J. Golding		10	6
L. C. R. Norris-Elye		5	0
Mrs. Craig		2	6
A. C. Powell		2	6
Rev. T. W. Slarges	1	1	0
R. Scott Miller		10	6
Clem Watson	1	1	0
John Hurst		5	0
R. D. Pullar	1	0	0
W. Bradley		5	0
Hon. M. C. Hawke		5	0
	£36	11	0

Owen's Farms.

For some years the poultry establishment on Martha's Vineyard, an island off the coast of the State of Massachusetts, owned by Mr. W. Barry Owen, has been one of the largest and best advertised breeding plants in America, and it has been splendidly conducted as a business proposition. Announcement is now made that for personal reasons Mr. Owen has sold the place to Mr. Maurice F. Delano, who has been manager, and that gentleman will continue the business as before.

M. A. de Perre.

His Majesty the King of the Belgians has conferred the Chevaliership of the Order of Leopold II., upon M. A. de Perre, Secretary General of the Belgian Federation of Poultry Societies.

Importance of a consuming population.

Production beyond the capacity of purchasers to utilise means reduced prices. A statement is made that the number of cases of eggs cold stored in California rose from 35,000 in 1908, to 97,000 in 1912, and that the price declined from 31.68 cents. in the former year to 29.86 cents. in the latter, which would show that, at least, the spring demand on the Pacific slope has been provided for.

OUR BOOK MARKET.

Any of the following books will be supplied at the prices named. Cash must always accompany orders.

Amateur Poultry - Keeper. By W. M. ELKINGTON. 120 pages. Fifteen illustrations. Price, 1/2 post free.

Incubators and their Management. By J. H. SUTCLIFFE. Fifth Edition. Illustrated. Price, post free, 1/2.

Lett's Poultry - Keeper's Account Book. Edited by LEWIS WRIGHT. Cr. 8vo. Post free in the United Kingdom, the Colonies, and foreign countries, 2/8.

Poultry and Egg Raising at Home. By W. M. ELKINGTON. Illustrated. Price, post free 1/2.

Poultry Culture for Profit. By Rev. T. W. STURGES, M.A. Third Edition. Cr. 8vo, 134 pages. Fully illustrated. Post free in the United Kingdom, the Colonies, and foreign countries, paper covers, 1/3; cloth, 1/9.

Poultry Fattening. By EDWARD BROWN, F.L.S. Fifteen illustrations, 120 pages. Price, 1/2 post free.

Poultry for Prizes and Profit. By JAMES LONG. New Edition. Revised by W. M. ELKINGTON. Illustrated. Post free 6/4 in the United Kingdom; in the Colonies and abroad, 7/6.

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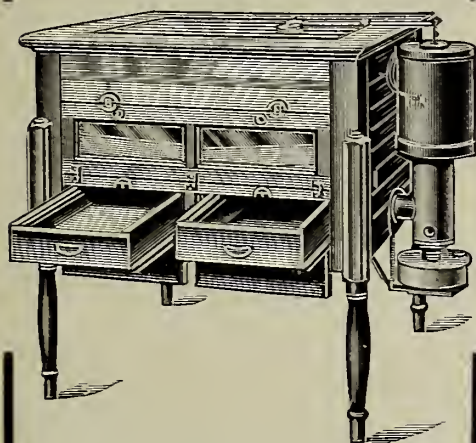
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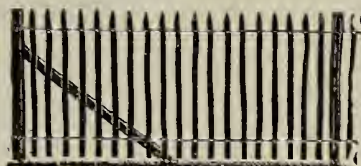
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With every four dozen Charts we present, free of charge, a file in which to keep them, or these files may be purchased at 6d. each.

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THE POULTRY CLUB.

The Monthly Meeting of the Council was held on May 9th, at the London Chamber of Commerce. There were present, Mr. Richard Watson, in the chair, Miss S. Carey, Dr. S. E. Dunkin, Captain Ralph, R. Allen, and Messrs. C. Tyrwhitt-Drake, R. Fletcher Hearnshaw, William Rice, William Clarke, P. H. Bayliss, C. Thellusson, L. C. Verrey, and T. Threlford, Hon. Sec.

Minutes of the April meeting were read and confirmed.

The following new members were duly elected:—

Recommended by the Cheshire Branch—

Mr. Dennis, Shakeshaft, Cogshall, Northwich.

Recommended by the Cornwall Branch—

Messrs. Northcott & Son, Holmbush, near Par (life).

Recommended by the Devon Branch—

Mrs. E. Callard, Buckfastleigh, S. Devon.

Recommended by the Gloucestershire Branch—

Mr. William Wills, Marlwood Farm, Thornbury.

Recommended by the Kent Branch—

Mr. Robert L. Mond, Combe Bank, Sundridge.

Recommended by the Lancashire Branch—

Mr. Louis Duckworth, 45, Thompson Lane, Hollinwood, Oldham.

Recommended by the Surrey Branch—

Mr. B. W. Earl, New Malden.

Mr. C. Ive, Bridge Road, East Molesey.

Recommended by the Worcestershire, Warwickshire and Staffordshire Branch—

Mr. W. F. C. George, New Barnes Mill, St. Albans.

Recommended by the Yorkshire Branch—

Mr. E. Whitaker, Carr's Farm, Wadsworth, Hebden Bridge.

Mr. C. E. N. Leith Hay of Rannes, Leith Hall, Kennethmont, Aberdeenshire.

Mr. J. Savory, Portishead Poultry Farm, High Street, Portishead.

Mr. Herbert Fear, Staplegrove, Taunton.

Mr. George Templeman, 43, High Street, Taunton.

The following Societies were duly associated:—

The Hayle Show, Hon. Sec., Mr. H. Ware, 17, Mount Pleasant, Hayle, Cornwall.

Sevenoaks and District Fanciers' Association, Hon. Sec., Mr. A. H. Westcott, Woodleigh Cottage, Sevenoaks.

The following Shows announced to be held under Club Rules were granted specials:—

The Prestwood Horticultural Society.

Royal Northern Agricultural Society.

The Hayle Show.

Correspondence.

Several letters were read and left in the hands of the Secretary to deal with.

Proposed Club Show.

The sub-committee reported that owing to the small number of replies to the circular letter sent out to the members, and having regard to the heavy expenses of running a Show at the various Halls which were suggested, they, after careful consideration, reluctantly recommend that no further steps be taken. They further reported that they considered that something should be

done at existing Shows for those members of the Poultry Club who were not fortunate enough to win the various Breed Cups and other Specials now offered, and submitted a scheme for the consideration of the Council. The Report, so far as the Show was concerned, was unanimously adopted; but as several members wished to put forward other schemes it was decided that the matter should be on the Agenda for the next meeting, and in the meantime the Hon. Secretary to invite the members of the Council to forward their various proposals so that they could be fully discussed.

Wallis Memorial.

The Committee dealing with this Memorial recommend that the money received should be invested and the interest used to provide two Specials (one open and one novice), each year to be offered for competition and won outright, amongst such breeds or groups of breeds as the Council might decide. This recommendation was carried unanimously, and it was also decided to have a Trophy as well.

Judges.

The attention of the Council was drawn to the list of Judges in the Year Book, and it was decided that such list must not be considered as a complete or authorised list.

The next Meeting of the Council will be held at the London Chamber of Commerce, Oxford Court, London, E.C., on June 13th, at 2 p.m. All prospective members' names must reach the Hon. Sec. on or before June 5th, and if residing in a County having a Branch, through the Secretary of same. T. Threlford, Hon. Sec. and Treasurer, 2, St. Luke's Square, Victoria Docks, London, E.

Poultry in Missouri.

The Wabash Railway Company states that the income from the sale of poultry products in the state of Missouri in 1911 amounted to upwards of £10,000,000, which is a greater amount than is received from wheat, oats, hay, or any other farm crop excepting Indian corn. It is a greater annual income than is received from the sale of pigs or sheep, or dairy products.

Confiscated Eggs.

The *Reliable Poultry Journal* gives a photograph of cases of eggs "dumped" into the Mississippi river, stating that in one week during July, 1911, 41,000 dozens were so destroyed, almost fifty per cent. of the week's receipts. These had been condemned as unfit for food. Fortunately, the river named is wide and deep. Still the fish would have a good time.

Mr. Tamlin's Exports.

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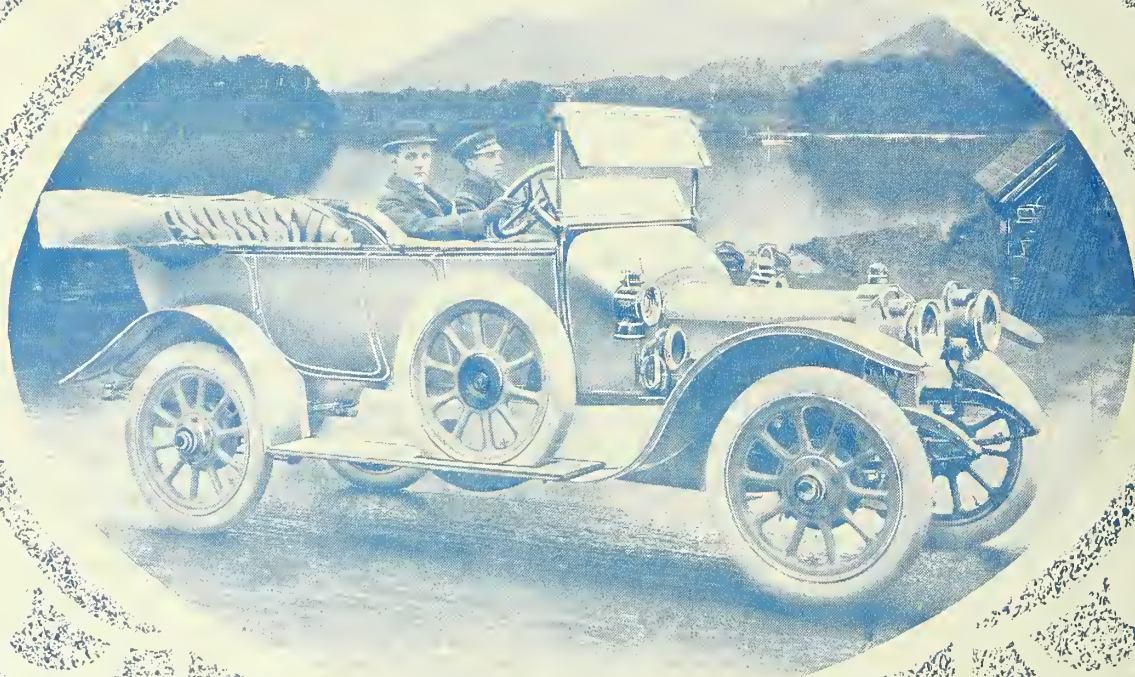
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